

25
Years
1985 - 2010

2010 *Fiber Optic*

Solutions Catalog

Micro@Link

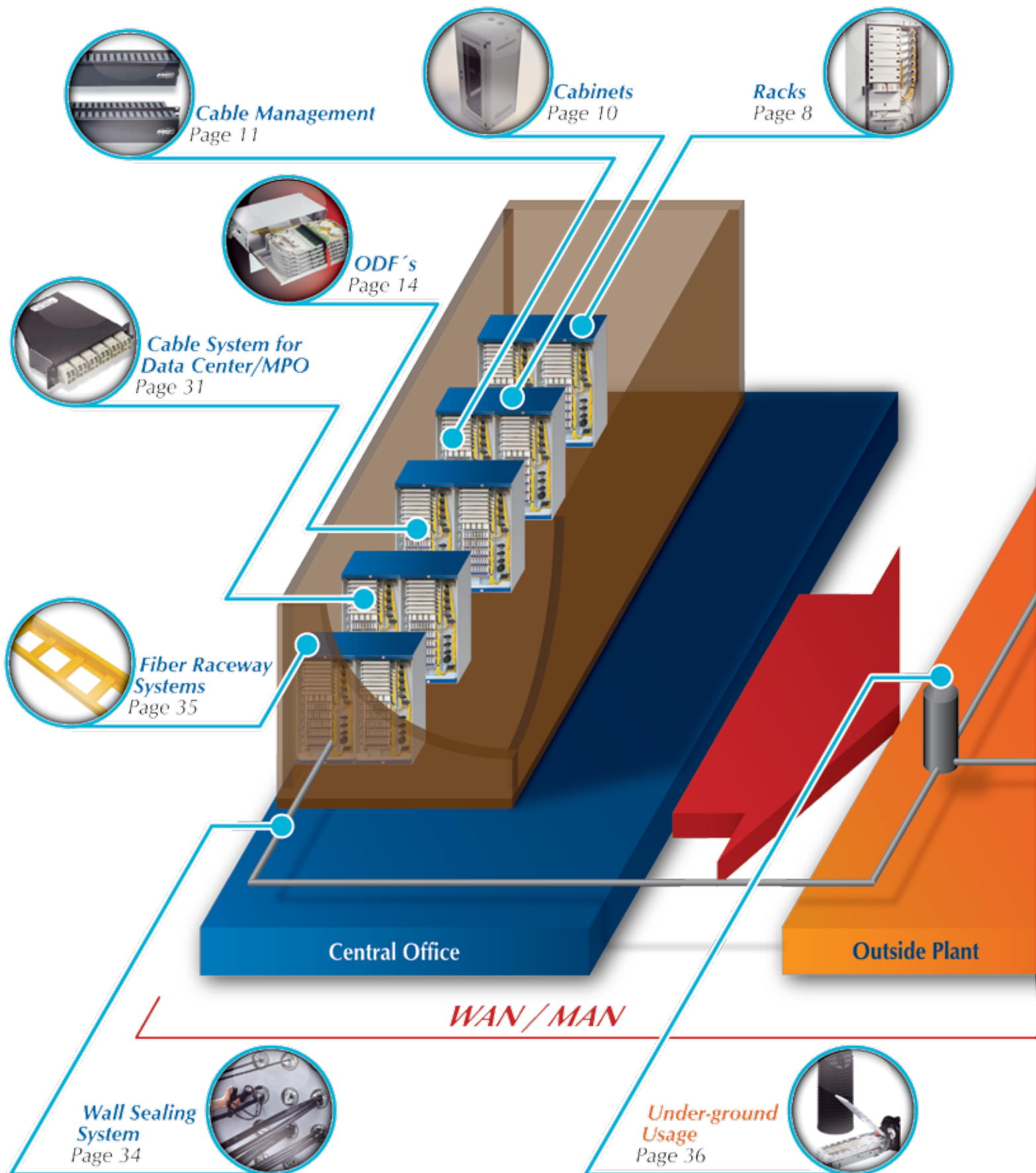


Innovative ideas, for your entire fiber network

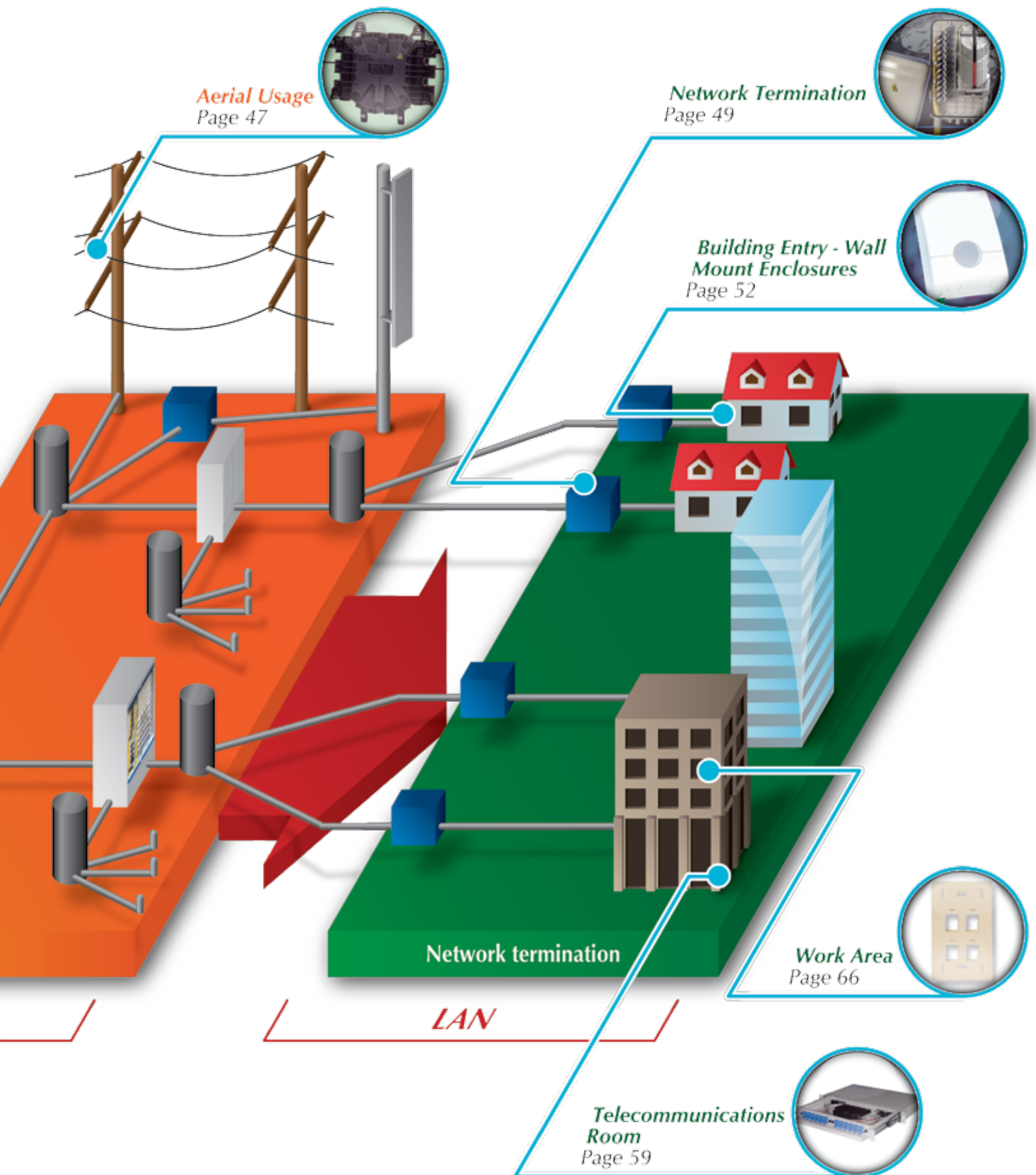


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MANAGEMENT PASSIVE DEVICES



MANAGEMENT PASSIVE DEVICES



SWITCHES

Fast Ethernet Switches**AT-8516F**

100FX (SC) x 16 ports managed Fast Ethernet Layer 2+ switch with 2 modular expansion bays.

The 8516F is a managed Fast Ethernet (100FX) switch ideal for government organizations that need the physical security that fiber optic connectivity provides. It is also good for environments where cabling needs to be run through harsh environments where electromagnetic and radio frequency interference exists. The 8516F has an 1RU form factor, is rack mountable, comes with two expansion bays and has DoS attack protection.

Model	Description
AT-8516F/SC-10	L2+ switch with 16-100FX (SC) ports plus 2 expansion slots

**AT-x900-48FS**

48 x fast Ethernet SFP ports Layer 3 switch with 4 x Gigabit uplink ports.

Advanced Layer 3 Switch featuring 48 100BASE-X SFP ports and 4 1000BASE-X SFP uplinks. Ideal for FTTH and FTTD, with Service Provider features, including dual AC or DC hot-swappable power supplies, best-in-class QoS, extended operating temperature.

Model	Description
AT-x900-48FS-60	48-Port 100FX (SFP) Fast Ethernet L3+ Per-Flow QoS IPv4/IPv6 Switch . RPS option.

GIGAbit Ethernet Switches**AT-9408LC/SP**

1000SX/LC x 8 ports managed Gigabit Ethernet switch with 4 SFP bays.

The 9408LC/SP is an ideal choice for small to medium businesses that need Gigabit fiber connectivity. It is rack mountable and has DoS attack protection. In addition to an extensive set of management features, it offers Layer 2/4 ready traffic management for VoIP networks.

Model	Description
AT-9408LC/SP-10	Layer 2+ switch with 8 1000BaseSX (LC) ports plus 4 active SFP slots

**AT-x900-24XS**

24 x SFP bays Gigabit Ethernet Layer 3 switch with two 30Gbps expansion bays. AlliedWare Plus Operating System.

The x900-24XS is the most advanced Gigabit Ethernet switch available. It provides fine service provisioning granularity, high availability, advanced QoS, flexibility and shares the same modular power supplies used in the other x900 series switches.

Model	Description
AT-x900-24XS-P-60	24-Port Gigabit SFP Expandable L3+ Per-Flow QoS IPv4/IPv6 Switch. RPS option

AT-9000/28SP

The AT-9000/28 is a 28 port managed Gigabit Ethernet switch that is ideally suited for the enterprise environment. This cost-effective switch has a 1RU form factor, and four SFP combo bays. It supports key features such as link aggregation, VLANs, QoS and 802.1x security.

Model	Description
AT-9000/28SP-10	28 port Gigabit Managed "Green" switch with 24 port 100/1000 Mbps SFP fixed configuration and 4 additional 100/1000 Mbps SFP ports in combination with 10/100/1000T ports

**AT-9924SP**

24 SFP slot Gigabit Ethernet Layer 3 switch.

The 9924SP is one of the most advanced Gigabit Ethernet switches available. As with all members of the 9900 series it provides fine service provisioning granularity, high availability, advanced QoS and shares the same modular power supplies used in the other 9900 series switches. The 9924SP is an ideal choice for networks that need high availability and SFP interface flexibility. The 9924SP also offers an extensive set of management features and offers advanced multicast routing options. Dual hot-swappable power supplies are supported and front-to-back airflow optimizes switch cooling.

Model	Description
AT-9924SP-60	Layer 3 Switch with 24 SFP slots (unpopulated), All Power Supply, except DC

**10G – Force 10 Switches****S2410**

The S2410 enables IT managers to deploy a reliable end-to-end 10 GbE data center solution, spanning from core aggregation to the server or storage edge.

- Ultra low latency interconnect switch for high performance cluster computing
- Low cost 10 GbE interconnect to network attached storage systems
- Low cost aggregation of 10 GbE uplinks from S25N or S50N switches in server racks
- Connects directly to 10 GbE servers
- Foundation for a virtualized applications model

Model	Description
S2410-01-10GE-24P	S2410P - 24 port 10GigE XFP switch and L2 software - XFP Optics required. RPS included

**Generic Uplink Modules****SFP Modules GIGA & 10G Allied Telesis compatible**

Model	Description
TUG-AT-SPSX	1000B-SX (LC) SFP, 550m Allied Telesis
TUG-AT-SPLX10	1000B-LX (LC) SFP, 10km Allied Telesis
TUG-AT-XPSR	10GB-SR (LC) XFP, 850nm Allied Telesis
TUG-AT-XPLR	10GB-LR (LC) XFP, 1310nm 10 km Allied Telesis



MicroLink

SWITCHES



SFP Modules GIGA & 10G Cisco compatible

Model	Description
TUG-GLC-SX-MM	GE SFP, LC connector SX Cisco
TUG-GLC-LH-SM	GE SFP, LC connector LH Cisco
TUG-GLC-ZX-SM	GE SFP, LC connector ZX Cisco
TUG-XEN-10GBSR	10GBASE-SR XENPAK Module Cisco
TUG-XEN-10GBLR	10GBASE-LR XENPAK Module Cisco

SFP Modules GIGA & 10G 3Com compatible

Model	Description
TUG-3CSFP91	1000BASE-SX SFP Transceiver 3COM
TUG-3CSFP92	1000BASE-LX SFP Transceiver 3COM
TUG-3CSFP97	1000BASE-LH SFP Transceiver 3COM
TUG-3CXFP92	10-Gigabit LR XFP Transceiver 3COM
TUG-3CXFP94	10-Gigabit LR XFP Transceiver 3COM

MEDIA CONVERTERS



Allied Telesis Fast Ethernet & GIGA Media Converters



MC1000 & MC100

Standalone Unmanaged Media Converters

These popular standalone media converters convert Ethernet, fast Ethernet or Gigabit Ethernet copper to your choice of fiber.

Model	Description
AT-MC102XL-10	100TX (RJ-45) to 100FX (SC) Fast Ethernet media converter
AT-MC103XL-10	100TX (RJ-45) to 100FX single-mode fiber (SC) media converter
AT-MC1004-10	1000T to 1000SX/SC Media Converter



AT-MCR12

Power Distribution Chassis for up to 12 independently-operating unmanaged, standalone Media or Bridging Media Converters. May be either AC or DC powered, with optional redundant power supply. Desktop or 19" rack mount installation.

Model	Description
AT-MCR12-10	12 slot media converter rackmount chassis with redundant power option

ATOP 10/100m & 10/100/1000m Intelligent Rack Type Media Converter Series



AF100 & AF1100 series are a kind of 10/100 Mbps and 10/100/1000 Mbps intelligent adaptive fast Ethernet media converters. It can implement data transmission between twisted pair electrical signals and optical signals which are the two types of network connection media. This type of media converters can extend the transmission distance of a network from 100M over copper wires to 120KM in which there is no help any other converter. It should be installed in 14 rack media converter chassis when used.

Features:

- Full duplex and half duplex transmission and capable of automatic negotiation, efficient built-in switching core, to implement flow control and reduce broadcast packets.
- The transmission of extra-long packs over VLAN
- The selection of multiple types of fiber ports such as a dual-fiber multi-mode, dual-fiber single mode and single fiber single mode, to satisfy the extended requirements of user.

10/100Mbps Dual fiber

Part Number	Data Rate (MAX) GB/Sec	Case Temp. Range °C	Reach	Selection Media Type	Operating Wavelength	Optical Fast Ethernet	Optical Gigabit Ethernet
AF 100-2	10/100M	-10-55°C	2 Km	MMF	1310nm	X	
AF 100-25	10/100M	-10-55°C	25 Km	SMF	1310nm	X	



10/100/1000Mbps Dual fiber

Part Number	Data Rate (MAX) GB/Sec	Case Temp. Range °C	Reach	Selection Media Type	Operating Wavelength	Optical Fast Ethernet	Optical Gigabit Ethernet
AF 1100M	10/100/1000M	-10-55°C	550 m	MMF	850nm	X	X
AF 1100M-2	10/100/1000M	-10-55°C	2 Km	MMF	1310nm	X	X



Media Converter Rack

14 slots media converter Rack

AF-R 14 series device is a kind of switch chassis which can hold at most 14 different types of rack-type media converters. It has one or two powers which can support the rack work with automatic negotiation.

Features:

- Supporting : AC220V and DC-48V two kinds of power in
- Supporting: Different types of media converter work together.
- Supporting: Hot-swappable
- Slots: 14



16 slots media converter Rack

AF-R16 series device is a kind of switch chassis which can hold at most 16 different types of rack-type media converters, It has one or two powers which can support the rack work with automatic negotiation.

Features:

- Supporting AC220V and DC-48V two kinds of power in
- Supporting Different types of media converter work together.
- Supporting Hot-swappable
- Slots: 16

RACKS

Raychem

Generic Rack FIST-GR2



This rack is a unique physical fiber management system that accommodates connector panels and shelves for splicing, patching, equipment and devices.

Features

- Integrates fiber, pigtail and cable management
- Accommodates a variety of shelves and equipment
- Easy access to cables, pigtails and jumpers during installation, maintenance and upgrade
- Various mounting options (wall, back-to-back, side-to-side)
- Easy adaptation to specific applications by variation of the rack configuration, the shelf configuration and routings of pigtails and jumpers

FIST - GR2 - X X - X X

Height

1 - 2.0m

2 - 2.2m

Width

	Total width (mm)	Left Panel	Central Panel	Right Panel
6	600	-	600	-
7	750	-	600	150
9	900	150	600	150
0	1 050	150	600	150

Type

S - Stand - alone rack

Doors and panels

P - With panels and side duct doors, no central door.

D - With panels, central and side duct doors, without locks.

L - With panels, central and side duct doors with locks.

FIST-GR2 Accessories included



Cable Attachment accessories with single cable Clamps

P/N: FIST-GR2-CAA-1-XX/XX (5 units)

XX/XX= Cable diameter in mm (12/16, 16/22, 22/28 or 28/34)



Cable element management tray

P/N: FIST-GR2-CEMT-M (ETSI) (1 Unit)

A cable element management tray can be put in the bottom of the rack above the base duct. It facilitates the routing of cable elements to the shelves

A cover is included.



Horizontal pigtail management

P/N: FIST-GR2-HPM-I (19") (1 Unit)

A 19" HPM with mounting bracket adapters for symmetrical installation between ETSI mounting profiles.

A horizontal pigtail management system can be fitted to store functional overlength of patchcords for patching within the same rack.

Six half round drums are used to guide patchcords entering from the left or from the right side duct.

The system can be fitted in the rack for either left or right patchcord entrance by simply turning it inside down.

Bag of drums

P/N: FIST-GR2-DRM

Kit of 10 drums with screws and nuts to fix them to drum plate.

**FIST-GR2 Optional Accessories****Velcro roll**

P/N: FISTV-E7187-6316

Velcro to segment or secure pigtails. Supplied on a roll 25m long (width 25mm) to be cut to length as required.

**Flexible tubing**

P/N: FIST-GS-FLEX-17-50-S5027

When guiding loose tubes from the cable termination in the rack to the entrance of the shelf, flexible tubing is used to protect the loose tubes and to control the bend radius.

The flexible tubing has a minimum inner diameter of 17mm and a capacity of up to 8 loose tubes.

**Flexible tube clamps**

P/N: FISTV-FTC

A set of 10 plastic clamps to be used instead of tie - wraps to secure flexible tubes onto the cable element mangement tray or other locations (screws are included en the kit).

**FIST-GR2 Tools****Allen key**

P/N: FACC-ALLEN-KEY-5-350

Allen key, diameter 5mm, length 350 mm for back-mounting of shelves in rack

**Cage nut tool**

P/N: FACC-CAGE-NUT-TOOL

Tool to install cage nuts in the rack



RACKS

MicroLink Floorstanding Rack



Model	Width (cm)	Depth (cm)	Height (cm)	Rack Unit Capacity	Features
1	57	34	210	46	Colors: Microtex Black, Beige Ral 7032, Gray Ral 7035
2	57	34	180	40	
3	57	34	150	33	
4	57	34	120	26	

Floorstanding Rack with Organizer



Model	Width (cm)	Depth (cm)	Height (cm)	Rack Unit Capacity	Features
1	74	43	210	46	Colors: Microtex Black, Beige Ral 7032, Gray Ral 7035
2	74	43	180	40	
3	74	43	150	33	
4	74	43	120	26	

Wallmount Rack



Model	Width (cm)	Depth (cm)	Height (cm)	Rack Unit Capacity	Features
1	57	45	90	20	Colors: Microtex Black, Beige Ral 7032, Gray Ral 7035
2	57	45	72	16	
3	57	45	60	13	

CABINETS

MicroLink Freestanding



Model	Width (cm)	Depth (cm)	Height (cm)	Rack Unit Capacity	Features
1	60	60	120 - 150 - 180 - 210	26 - 33 - 40 - 46	Doors: Glass, Acrylic, Perforated Panel: Removable Supports: Wheels, Levelers Colors: Microtex Black, Beige Ral 7032, Gray Ral 7035
2	60	80	120 - 150 - 180 - 210	26 - 33 - 40 - 46	
3	60	100	120 - 150 - 180 - 210	26 - 33 - 40 - 46	
4	70	80	120 - 150 - 180 - 210	26 - 33 - 40 - 46	
5	70	90	120 - 150 - 180 - 210	26 - 33 - 40 - 46	
6	70	100	120 - 150 - 180 - 210	26 - 33 - 40 - 46	

Wallmount

Model	Width (cm)	Depth (cm)	Height (cm)	Rack Unit Capacity	Features
1	60	50	60	13	Doors: Glass, Acrylic, Perforated Panel: Removable Colors: Microtex Black, Beige Ral 7032, Gray Ral 7035
2	60	50	50	9	
3	60	50	40	7	
4	60	50	30	5	

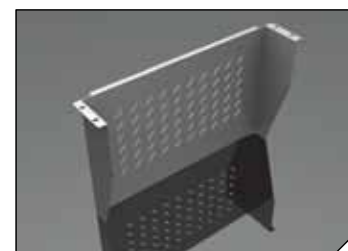


CABLE MANAGEMENT

Solid Shelf

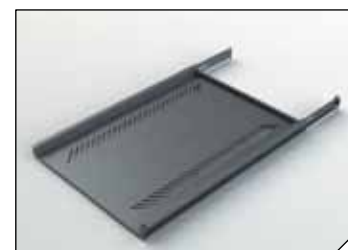
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Model	Width (inches)	Depth (cm)	Height (cm)	Rack Unit Capacity	Features
1	19"	26	N/A	1	Presentations: Solid, Perforated Colors: Microtex Black, Beige Ral 7032, Gray Ral 7035
2	19"	30	N/A	2	
3	19"	40	N/A	3	



Sliding Tray

Model	Width (inches)	Depth (cm)	Height (cm)	Rack Unit Capacity	Features
1	19"	65,5	N/A	1	Colors: Microtex Black, Beige Ral 7032, Gray Ral 7035



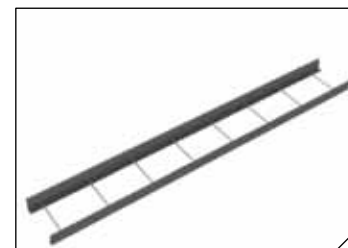
Horizontal Organizer

Model	Width (inches)	Depth (cm)	Height (cm)	Rack Unit Capacity	Features
1	19"	N/A	N/A	1	Colors: Microtex Black, Beige Ral 7032, Gray Ral 7035
2	19"	N/A	N/A	2	



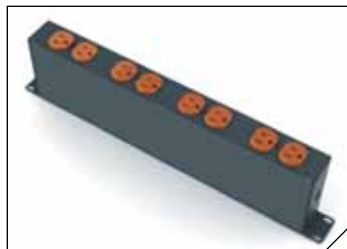
Vertical Organizer

Model	Width (cm)	Depth (cm)	Height (cm)	Rack Unit Capacity	Features
1	20	4,4	210	N/A	Colors: Microtex Black, Beige Ral 7032, Gray Ral 7035
2	20	4,4	180	N/A	
3	20	4,4	150	N/A	
4	20	4,4	120	N/A	



CABLE MANAGEMENT

Horizontal Power Strip



Model	Width (inches)	Depth (cm)	Height (cm)	Rack Unit Capacity	Features
1	19"	N/A	N/A	1	Grade: Medical or Industrial

Vertical Power Strip



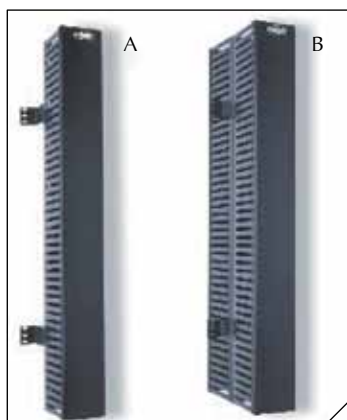
Model	Width (cm)	Depth (cm)	Height (cm)	Rack Unit Capacity	Features
1	11	5	210	N/A	Grade: Medical or Industrial
2	11	5	180	N/A	
3	11	5	150	N/A	
4	11	5	120	N/A	



Vertical Finger Duct panels

Features:

- Cable management accessories for EIA standard 19" equipment racks
- Suitable for high performance twisted pair and optical fiber distribution cables and patch cords
- Vertical finger duct panels available in single- and double-sided versions
- Center mount Vertical Finger Duct Panels mount between racks for added stability
- Replacement covers are packaged ten (10) per box

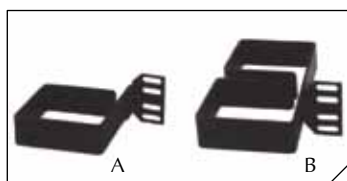


Description	Mounting Position	Panel Height	Front (HxD)	Rear (HxD)	Figure	Part Number
Single-Sided	Side Mount	35"	4" x 5"	-	A	1375165-1
		78"	4" x 5"	-	-	1375258-1
	Center Mount	35"	4" x 5"	-	B	1375167-1
		78"	4" x 5"	-	-	1375260-1
Double-Sided	Side Mount	35"	4" x 5"	4" x 5"	A	1375164-1
		78"	4" x 5"	4" x 5"	-	1375257-1
	Center Mount	35"	4" x 5"	4" x 5"	B	1375166-1
		78"	4" x 5"	4" x 5"	-	1375259-1
	Front or Rear	35"	-	-	-	1479226-1
	Front	78"	-	-	-	1479227-1
	Rear	78"	-	-	-	1479227-2

Rack Mount Cable Management Rings, Vertical

Features:

- Mount between adjacent panels
- Provide a vertical "trough" for patch cable management



Description	Figure	Part Number
Single Ring	A	558334-1
Duoble Ring (for front and rear management)	B	406498-1

Horizontal Finger Duct Panels

Features:

- Cable management accessories for EIA standard 19" equipment racks
- Suitable for high performance twisted pair and optical fiber distribution cables and patch cords
- Horizontal finger duct panels available in single- and double-sided versions

Description		Panel Height	Front (HxD)	Rear (HxD)	Figure	Part Number
Single-Sided	Cable Management panel	1U (1.75")	1.5" X 2"	-	-	1375161-X
			1.5" X 3"	-	-	1375162-X
		2U (3.50")	3.0" X 3"	-	A	1375163-X
	Front Replacement Cover	1U (1.75")	-	-	-	1479225-X
		2U (3.50")	-	-	-	1479222-X
Double-Sided	Cable Management panel	1U (1.75")	1.5" X 2"	1" x 4"	-	1375160-X
			1.5" X 3"	1" x 4"	-	1375159-X
		2U (3.50")	3.0" X 3"	2" x 4"	B	1375158-X
	Front Replacement Cover	1U (1.75")	-	-	-	1479225-X
		2U (3.50")	-	-	-	1479222-X
	Rear Replacement Cover	1U (1.75")	-	-	-	1479224-1
		2U (3.50")	-	-	-	1479223-1

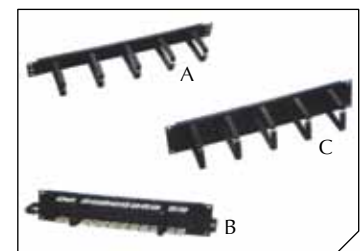


Horizontal Ringed cable Management Panels

Features:

- Panels mount to the front of 19" racks and provide for the orderly dressing and routing of cable assemblies
- Threaded studs on the back of the panels allow the installation of an optional Cable Support Bar (see this chapter)
- 2U (3.50") 569049-1 comes with cable clips

Description		Figure	Part Number
1U Panel	1.75"	A	558329-1
2U Panel	3.50"	B	558331-1
	3.50" with Cable Clips	C	569049-1

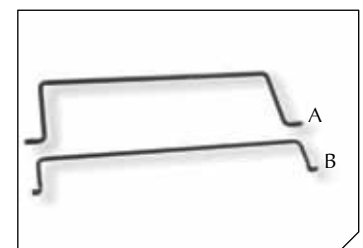


Cable Support Bars

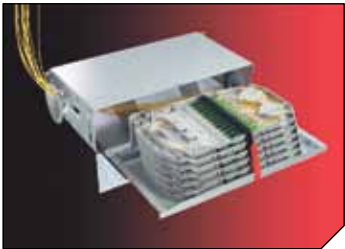
Features:

- Designed to provide additional cable support and routing control in the rear of 19" racks and panels
- Cable supports bars that mount directly to rack provide the best support.

Description	Figure	Compatible with Panel	Part Number
Mounts to back of rack, 5" deep	A	Mounts to rack	557548-1
Mounts to back of rack, 2" deep	B	Mounts to rack	406042-1



Raychem



Patching and Splicing Shelf FIST-GPS2

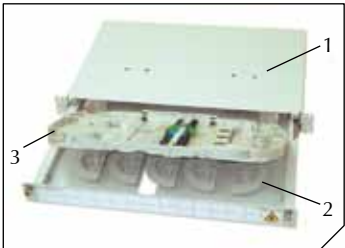
The Patching and Splicing Shelf is the mechanical assembly for the fiber management system that provides the function of patching pigtails to pigtails or of splicing cables to pigtails and connecting them in a rack environment.

Features

- Splicing and patching in the same shelf
- Accommodates up to 72 splices and standard connectors per shelf (capacity is doubled when small form factor connectors are used)
- Splices, splitters and connectors are housed in trays, allowing for easy handling and identification
- Compatible with all types of connectors, including small form factor connectors
- Modular design
- Trays available for loose tube single fiber, ribbon pigtail, intra-facility and break-out cable
- To be inserted on FIST-GR2

BASIC SYSTEM SUB-UNITS

1. **Shelf:** Options and shelf's heights see chart (FIST-GPS2 capacities)
2. **Tray:** See next page
3. **Storage Basket** (optional, expressed by the last digit in the ordering reference): Basket options and Storage Basket's heights see chart (FIST-GPS2 capacities)



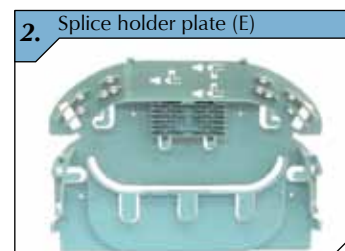
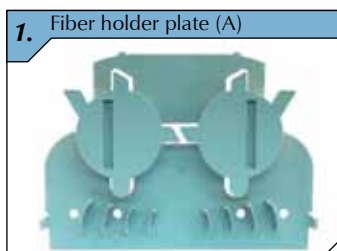
(FIST-GPS2 capacities)

Legend		Chassis height			
Option		L: 167mm	I: 125 mm	J: 88mm	K: 44mm
<div><div></div>FIST - GPST - 12 Tray</div> <div><div></div>Storage basket for 3HU and 2HU chassis</div> <div><div></div>Storage basket for 1HU chassis</div>	0 No trays	<div></div>	<div></div>	<div></div>	<div></div>
	2 2 trays	<div></div>	<div></div>	<div></div>	<div></div>
	4 4 trays	<div></div>	<div></div>	<div></div>	NA
	6 6 trays	<div></div>	<div></div>	NA	NA
	8 8 trays	<div></div>	NA	NA	NA
	R Storage + 0 trays	<div></div>	<div></div>	<div></div>	<div></div>
	R Storage + 1 tray	NA	NA	NA	<div></div>
	S-0 Storage + space for 1 tray	NA	NA	NA	<div></div>
	T Storage + 2 tray	<div></div>	<div></div>	<div></div>	NA
	U Storage + 4 tray	<div></div>	<div></div>	NA	NA
	V Storage + 6 tray	<div></div>	NA	NA	NA

Specials:
FIST-GPS2-K-NNN-R
FIST-GPS2-K-NNN-S-0

44mm, storage only, no space for any trays
44mm, storage + space for 1 tray

TRAYS: Trays are ordered per set of 2 complementary pieces: Fiber holder plate (A) and/or Splice holder plate (E).

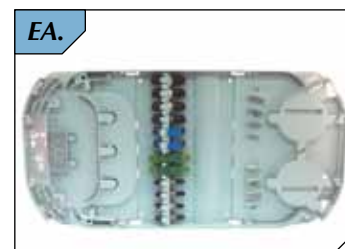
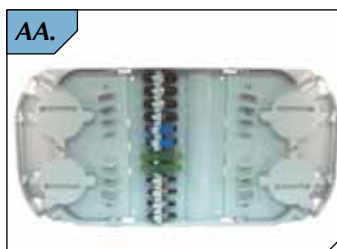


Each set can hold 24 standard or 48 SFF fiber connections with the next configurations:

AA: Fiber holder plate on both sides

EA: Splice holder plate (E) Left side / Fiber holder plate (A) Right side

AE: Fiber holder plate (A) Left side / Splice holder plate (E) Right side



FIST - GPS2 - **X** - **XX** **X** - **X**

Tray options

NN - Without trays
AA - Patch on both sides
EA - Splice left side - Patch right side
AE - Patch Left side - Splice right side

Number of trays and storage units

Trays only	Storage and trays
0 No tray	R Storage only
2 2 trays	S Storage + 1 tray (K only)
4 4 trays	T Storage + 2 trays (I, J, L only)
6 6 trays	U Storage + 4 trays (I, L only)
8 8 trays	V Storage + 6 trays (L only)

Chassis type

		Number of fibers capacity	
	Height	With storage	W/O storage
K	44 mm (1U)	12	24
J	88 mm (2U)	24	48
I	125 mm (3U)	48	72
L	167 mm (4U)	72	96

Connector adapter with retainer

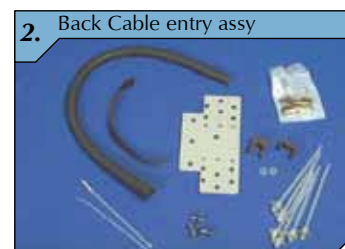
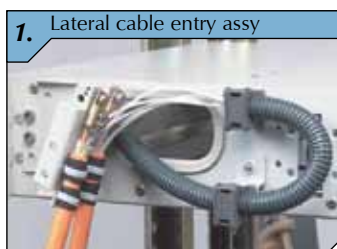
N - No adapters

Single mode standard

Min. return loss	SC	FC	E2000	LC	ST	MU
45 dB (PC)					Q	
50 dB (UPC)	A	C		L1		U1
60 dB (APC 8°)	B	D	E9	L2		

FIST-GPS2 Accessories included

- Trays and its respective smouvs when you order a splice holder plate
- One of two options: Lateral cable entry assy for 1U to 4U chassis type or Back Cable entry assy for 2U to 4U chassis type.





Identification cards and card holders

P/N: FIST-GPS2-ID-10

10 identification cards and card holders.

FIST-GPS2 Optional Accessories



23" mounting brackets for 19" shelf

P/N: FIST-MB2-B

Brackets to mount a 19" shelf in a 23" equipment rack.

Velcro roll

P/N: FISTV-E7187-6316

See page (9)

Flexible tubing

P/N: FIST-GS-FLEX-17-50-S5027

See page (9)

FIST-GPS2 Tools

Allen key

P/N: FACC-ALLEN-KEY-5-350

See page (9)

Cage nut tool

P/N: FACC-CAGE-NUT-TOOL

See page (9)

Generic Splicing Shelf FIST-GSS2



The **Generic Splicing Shelf (FIST-GSS2)** is a unique fiber management system that fits in a standard rack (19" or 23").

Features

- Single circuit management (splice and storage of individual circuits)
- Single element/ribbon management (splice and storage of groups of fiber/ribbon)
- It can hold device management (splitters, WDMs)
- Modular, flexible and easy to install
- Compatible with most cable types (single fiber or ribbon) and cable construction (loose tube, central core, slotted core)
- To be inserted on FIST-GR2

The FIST-GSS2 accommodates most cable types and offers the possibility to splice a cable to another cable or to pigtails.

The UMS (Universal Mounting System) profiles provide the foundation for mounting combinations of **FIST-SOSA2** (see page 18) organizer tray and/or **FIST-SASA2** (see page 19) splitter modules.

FIST-GSS2 Dimensions and capacity

		Chassis type	
		19"	23"(*)
Dimensions	Height (mm) H	125	125
	Width (mm) W	481	531
	Depth (mm) D	280	280

(*) Available on request

Available presentations in stock

KIT 03: Chassis type 19" – Capacity 96 Fibers*

*(If you use 250 µm fiber buffer, you can duplicate the fiber capacity storage)

Kit 03 accessories include:

- **Chassis, drawer, Cover, 48 Single Circuit trays and 96 smouvs**

The FIST-GSS2 chassis are ready to be fitted inside an optical rack using mounting brackets, screws and cage nuts.

Shelves can be ordered according to the rack dimension (ETSI or 19").

Inside, the organizer and contents are protected and since cable and/or pigtails exit through the side of the chassis, everything is safely located inside the rack, which therefore presents a clean and uncluttered appearance. The cover hinges and can easy be removed.

The trays includes 96 smouvs

- **Mounting brackets**

The sub-rack has field-mountable brackets to accommodate for:

- Front mounting of the shelf
- Mounting with brackets 240mm from the back of the shelf.
- Mounting specifically for Raychem's FIST Racks
- Back mounting

- **Transportation tubes**

Transportation tubes are pre-installed to ensure that:

- All cable elements are carried securely from the cable jacket termination to the entry of the FAS block.
- All bend radios are respected during drawer movement.
- The tubes are secured on the short FAS block by tube holders.

- **Identification cards and card holders (10 pcs) FIST-GSS2-ID-10**

10 identification cards and card holders to stick to the shelf cover.



Additional trays and splitters for FIST-GSS2

FIST-SOSA2



The FIST Splice Only Sub-Assemblies are modular assemblies designed to store fusion splices and the associated extra lengths of fiber.

The sub-assembly consists of two parts :

A. Organizer trays, designed to store fiber and splices for single element, single circuit, and single and multiple ribbon fiber management. The arrangement of the fiber and splices is such that fiber bending is controlled to conform with minimum bend radius requirements in all parts of the tray. The hinged feature of the trays provides protection for the fiber as well as facilitating easy access and identification. The size of the tray is kept to a minimum to ensure maximum space utilisation when used with different network products, and is optimised for single circuit, single element and ribbon applications. An extra length of between 650 mm and 2050 mm of each fiber at either side of the splice can be stored in each splice tray, allowing at least 10 re-splices. The splice holder is designed for heat-shrinkable (e.g. SMOUV-1120-02), ANT-type or RECORD splice protectors.

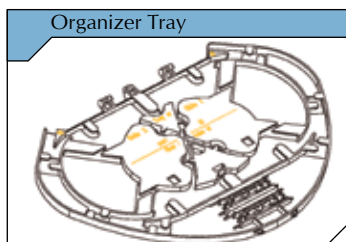
FIST-SOSA2 is an organizer tray available in two types:

- **Single circuit tray**
 - Fibers and splices are organized in circuits of 1 up to 4 fibers.
 - Each tray can hold a maximum of 4 fiber splices.
 - (limited to 2 when QPAK splice protectors)
 - SC denotes Single Circuit.
- **Single element tray**
 - Fibers and splices are organized per cable element of up to 12 fibers.
 - Each tray can hold a maximum of 12 fiber splices.
 - SE denotes Single Element.

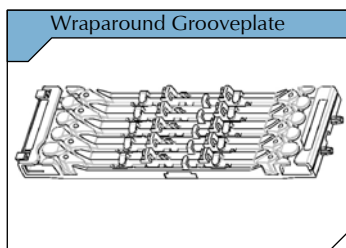
Parameter	Single Circuit tray SC	Single Element tray SE
Tray thickness measured in UMS units	1	2

Maximum number of splices

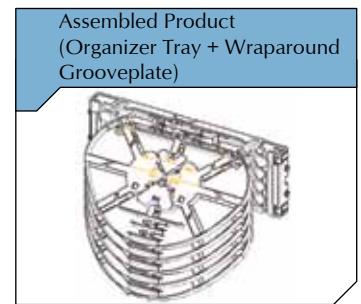
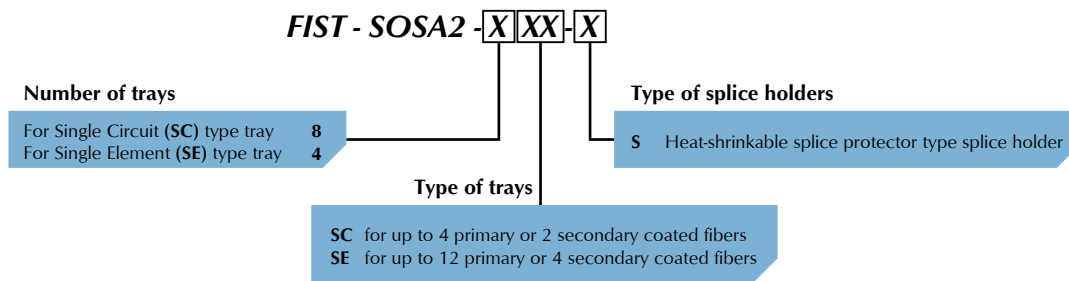
Parameter	Single Circuit tray SC	Single Element tray SE
250 um splices	4	12
900 um splices	2	4
Mixed 250/900 splices	2	4



Example: Single Circuit Tray with splice holders designed for heat-shrinkable splice protectors.



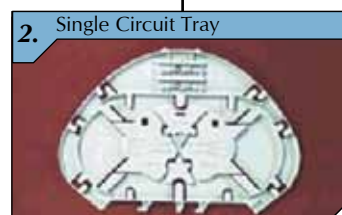
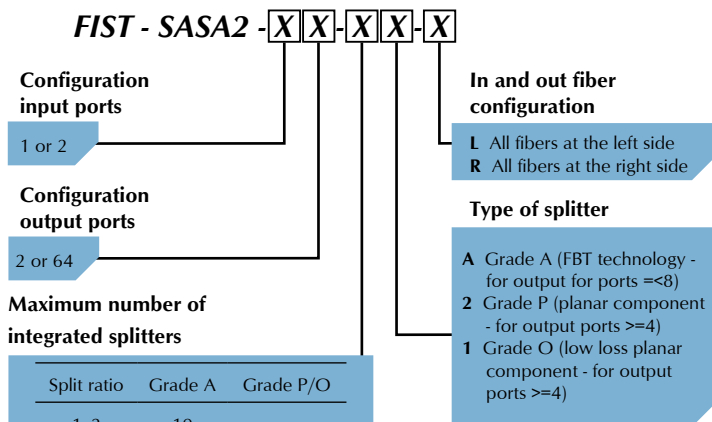
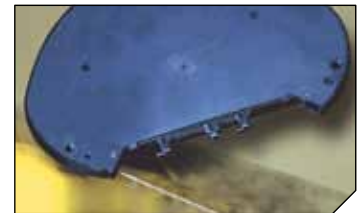
B. 'Wraparound' grooveplate designed with slots for routing fiber to and from the organizer trays. The wraparound feature, used in combination with the organizer tray, enhances single circuit or single element looped fiber storage capacity and in turn avoids unnecessary optical degradation in that cuts only need to be made when and where they are actually needed. It also provides flexibility and service reliability for progressive take-up of the fiber capacity. The grooveplate's modular design makes it possible to mix different fiber types within the same network element, either during initial installation or at a later date to accommodate emerging technology. Because fibers can enter and leave the grooveplate at all sides, the grooveplates can easily be integrated in in-line designs. (for example in-line closures). The organizer trays are clicked into these grooveplates.



FIST-SASA2

The FIST splitter array sub-assemblies are assemblies of trays which store and protect optical splitters whereby incoming and outgoing fibers are stored per single circuit on separate organizer trays ready for splicing into the network.

The FIST-SASA2 passive optical devices are factory mounted in a closed housing which is labelled to indicate the factory measured insertion loss per port.



Notes

- Specific product names will be assigned on an item by item basis for asymmetrical splitters.
- Please refer to RUD 5257 (grade A) and RUD 5330 (grade P and O) for detailed technical information.
- Some basic rules need to be respected when routing the fibers from the FIST-SASA2 to the standard splicing trays. Contact Microlink's technical department for support.

FIST-GSS2 Tools



Tube cutter

P/N: FACC-TUBE-CUTTER-01

Tube cutter to cut fiber optic protection tubes used with the FIST organizer management system



Tube stripper

P/N: FACC-TUBE-STRIPPER-02

Tube stripper OPTI-STRIP to cut the loose buffer tubes of the fiber cable in confined spaces.

Allen key

P/N: FACC-ALLEN-KEY-5-350

See page (9)

Cage nut tool

P/N: FACC-CAGE-NUT-TOOL

See page (9)



Front Patching Shelves



This is a product that can be configured to your needs and gives you the possibility of future growth.

You can order the product by individual parts, partially loaded or fully loaded and configured.

This product includes 2 parts:

1. Shelf
2. Slide-On Fusion & Adapter tray (SFAT)

1. Shelf

2U 24 port Rack Mount Enclosure

P/N: ODFH24PRAX

Dimensions:

Height: 90mm

Width: 484mm

Depth: 293 mm



5U 48 Port Rack Mount Enclosure

P/N: ODFH48PRAX

Dimensions:

Height: 220mm

Width: 484mm

Depth: 293mm



6U 96 Port Rack Mount Enclosure

P/N: ODFH96PRAX

Dimensions:

Height: 265mm

Width: 484mm

Depth: 293mm



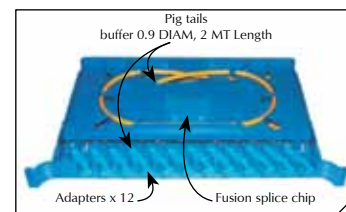
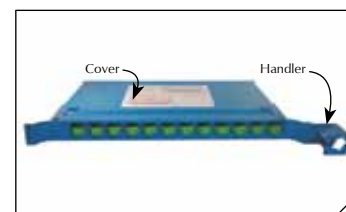
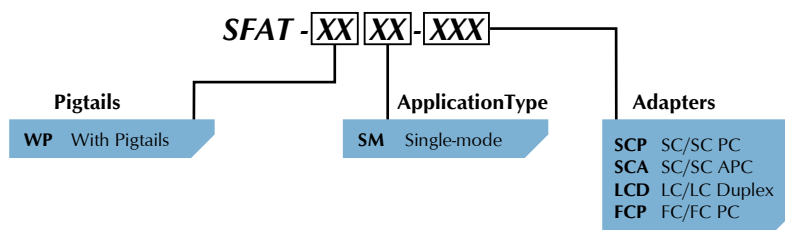
2. Slide-On Fusion & Adapter Trays (SFAT)

Trays to be inserted in 2U, 5U and 6U Rack Mount Enclosures.

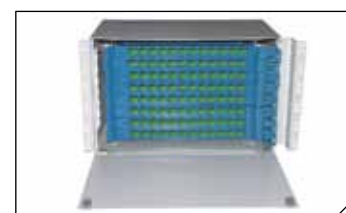
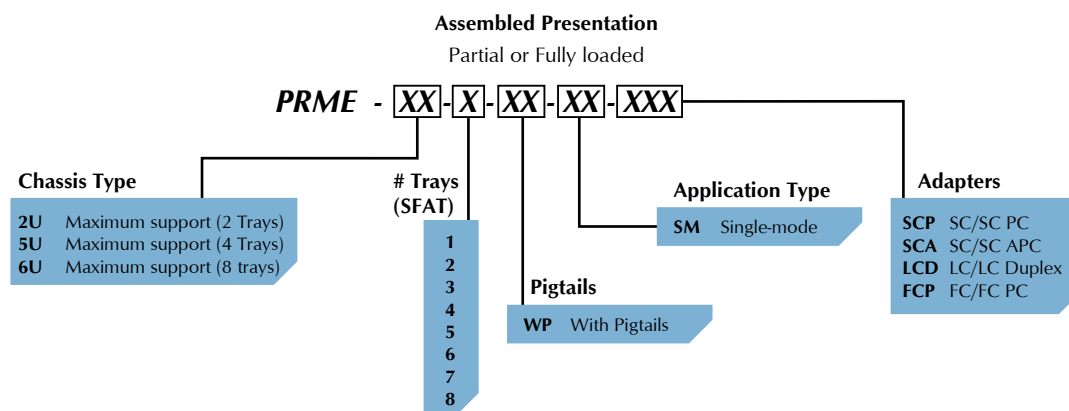
Description:

To order a Slide-On Fusion & adapter trays you have to consider 3 elements:

- Pigtails: Included
- Application Type: Single Mode
- Adapters: Other Passive Elements chapter / Fiber Optic Bulkhead Adapters - page 86. Only the adapter options showed in the following table are available for this product.



Praxtel Rack Mount Enclosure



Rack Mount Enclosure		2U	5U	6U
Number of Ports*		24	48	96
Number of Slide-on Fusion & Adapter Tray		2	4	8
Dimensions (mm)	Height	90	220	265
	Width	484	484	484
	Depth	293	293	293

*With LC Duplex Adapters you can double the number of ports



24 Fiber Patch and Splice Panel

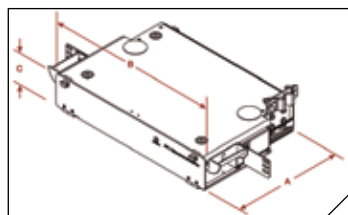
P/N: CNS024P

The unique design of the CNS024P incorporates a slide-out tray which provides access to the connectors/adapters and features a built-in splice chip that accommodates up to 48 single fusion splices. This design eliminates the cost and storage concerns of additional splice trays. In addition to the 48 single fusion splices, the CNS024P is designed to accommodate up to 24 terminations (standard density) or 48 fiber terminations (high density). The CNS024P provides a compact and versatile method of splicing and connectivity. Standard panels are available in empty, loaded and unloaded versions. Unloaded panels include six packs and adapters. Loaded panels also include pigtails (< 2 Meters).



Specifications

- Telcordia GR-63 NEBS tested
- Aluminum Material per ASTM B209
- Central Office White, Black, Texture Powder Coated
- Universal Mounting Bracket - WECCO, EIA
- 19" and 23" rack compatible
- Fiber storage capacity - one meter per spliced fiber (3mm jacket)
- Integral splice tray in rear
- Four 118mm LGX® positions



Depth (A) in Inches	Width (B) in Inches	Height (C) in Inches	Rack Units	Fiber Capacity
11	17	3.5	2	24/48

Ordering Information

2U Patch and Splice Panels

Part Number	Configuration
C215158	CNS024P- EMPTY
C215086	CNS024P with 24 USC (PB) adapters (4 Six Packs) 118 LGX Internal Splice Tray
C215093	CNS024P with 24 PSC adapters (4 Six Packs) 118 LGX Internal Splice Tray
C215122	CNS024P with 24 UST adapters (4 Six Packs) 118 LGX Internal Splice Tray
C215129	CNS024P with 24 PST adapters (4 Six Packs) 118 LGX Internal Splice Tray
FM000224	CNS024P with 12 UDL (dup) adapters (4 three Packs) 118 LGX Internal Splice Tray
FM000225	CNS024P with 12 PDL (dup) adapters (4 three Packs) 118 LGX Internal Splice Tray
C215381	CNS024P with 24 ASC adapters (4 six Packs) 118 LGX Internal Splice Tray
C215368	CNS024P with 24 UFC adapters (4 six Packs) 118 LGX Internal Splice Tray
C215377	CNS024P with 24 USC (ZR) adapters (4 six Packs) 118 LGX Internal Splice Tray
C215374	CNS024P with 24 AFC adapters (4 six Packs) 118 LGX Internal Splice Tray
FM000226	CNS024P with 12 PSF (dup) adapters (4 three Packs) 118 LGX Internal Splice Tray
FM000227	CNS024P with 12 USF (dup) adapters (4 three Packs) 118 LGX Internal Splice Tray
FM000228	CNS024P with 12 ASF (dup) adapters (4 three Packs) 118 LGX Internal Splice Tray
FM000229	CNS024P with 24 MTRJ adapters (4 six Packs) 118 LGX Internal Splice Tray

Note: All MM cable is 6.25µm unless otherwise specified

2U High Density Patch Splice Panels

Part Number	Configuration
FM000230	CNS048HD with 48 UST adapter (4 Twelve Packs) 118 GLX Internal Splice Tray
FM000231	CNS048HD with 48 PST adapter (4 Twelve Packs) 118 GLX Internal Splice Tray
C215134	CNS048HD with 24 UDL (dup) adapter (4 Six Packs) 118 GLX Internal Splice Tray
C215098	CNS048HD with 24 PSF (dup) adapter (4 Six Packs) 118 GLX Internal Splice Tray
C215143	CNS048HD with 24 PDL (dup) adapter (4 Six Packs) 118 GLX Internal Splice Tray
FM000232	CNS048HD with 24 USF (dup) adapter (4 Six Packs) 118 GLX Internal Splice Tray
FM000233	CNS048HD with 24 ASF (dup) adapter (4 Six Packs) 118 GLX Internal Splice Tray

Note: All MM cable is 6.25µm unless otherwise specified

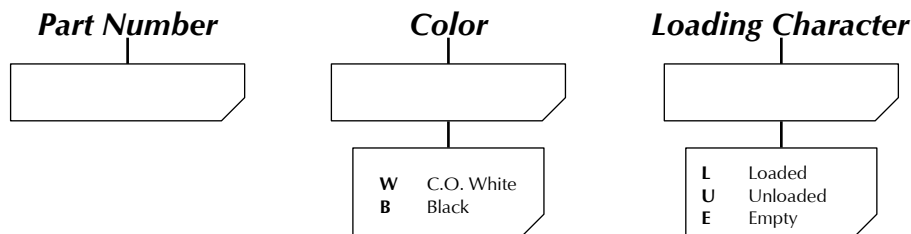
Accessories

Description	Part Number
Cable Clamp (Black)	C214522
Cable Clamp (White)	C210850

Connector / Adapter Key

Type	Description
ASC	Angle Polish SC (ZR) sleeve-SM
ASF	Angle Polish SC Duplex (ZR) sleeve-SM
PSC	Physical Polish SC (PB) sleeve-MM
PSF	Physical Polish SC Duplex (PB) sleeve-MM
USC (PB)	Ultra Polish SC with (PB) sleeve-SM
USC (ZR)	Ultra Polish SC with (ZR) sleeve-SM
USF	Ultra Polish SC Duplex (ZR) sleeve-SM
PST	Physical Polish ST (PB) sleeve-MM
UST	Ultra Polish ST (ZR) sleeve-SM
AFC	Angle Polish FC (ZR) sleeve-SM
PFC	Physical Polish FC (PB) sleeve-MM
UFC	Ultra Polish FC (ZR) sleeve-SM
ADL	Angle Polish LC Duplex (ZR) sleeve-SM
PDL	Physical Polish LC Duplex (PB) sleeve-MM
PLC	Physical Polish LC (PB) sleeve-MM
UDL (ZR)	Ultra Polish LC Duplex (ZR) sleeve-SM
UDL (PB)	Ultra Polish LC Duplex (PB) sleeve-SM
ULC	Ultra Polish LC (ZR) sleeve-SM

Select the seven digit part number of the panel you need, specify black or C.O. white, and choose the loading character desired.



Loaded: includes master plate, adapter plates, adapters, splice chip (24-48), pigtails with connectors, hardware, cable clamp.

Unloaded: includes master plate, adapter plates, adapters, splice chip (24-48), hardware, cable clamp.

Empty: includes master plate, mounting hardware, cable clamp

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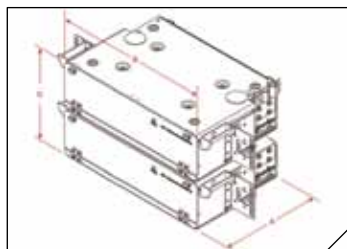
48 Fiber Patch and Splice Panel

P/N: CNS048P

The CNS048P is a rack mountable fiber patch and splice panel designed to accommodate up to 48 fiber terminations (standard density) or 96 fiber terminations (high density) and up to 144 single fusion splices with optional STF-48 splice drawer. The CNS048P provides a compact and versatile method of splicing and connectivity. Standard panels are available in empty, loaded and unloaded versions. Unloaded panels include six packs, adapters and splice drawers. Loaded panels also include pigtails (<3 Meters).

Specifications

- Telcordia GR-63 NEBS tested
- Aluminum material per ASTM B209
- Central Office White, Black, Texture Powder Coated
- Universal Mounting Bracket - WECCO, EIA
- 19" and 23" rack compatible
- Fiber storage capacity - one meter per spliced fiber (3mm jacket)
- Uses two STF-48 splice drawers
- Two panel package - 3U patch, 3U splice
- Nine 118mm LGX® positions



Depth (A) In Inches	Width (B) In Inches	Height (C) In Inches	Rack Units	Fiber Capacity
11	17	10.5	6	48/96

Ordering Information

6U Patch and Splice Panels (1-3U Patch, 1-3U Splice)

Part Number	Configuration
C211534	CNS048P- EMPTY
C211543	CNS048P with 48 USC (PB) adapters (8 Six Packs) Splice Drawer (2-48 position) 118 LGX
C211552	CNS048P with 48 PSC adapters (8 Six Packs) Splice Drawer (2-48 position) 118 LGX
C211579	CNS048P with 48 UST adapters (8 Six Packs) Splice Drawer (2-48 position) 118 LGX
C211588	CNS048P with 48 PST adapters (8 Six Packs) Splice Drawer (2-48 position) 118 LGX

Note: All MM cable is 6.25µm unless otherwise specified

6U Patch and Splice Panels (1-3U Patch, 1-3U Splice) continuation

Part Number	Configuration
FM000234	CNS048P with 24 UDL (dup) adapters (8 three Packs) Splice Drawer (2-48 position) 118 LGX
FM000235	CNS048P with 24 PDL (dup) adapters (8 three Packs) Splice Drawer (2-48 position) 118 LGX
C210928	CNS048P with 48 ASC adapters (8 six Packs) Splice Drawer (2-48 position) 118 LGX
C210913	CNS048P with 48 UFC adapters (8 six Packs) Splice Drawer (2-48 position) 118 LGX
C210922	CNS048P with 48 USC (ZR) adapters (8 six Packs) Splice Drawer (2-48 position) 118 LGX
C210917	CNS048P with 48 AFC adapters (8 six Packs) Splice Drawer (2-48 position) 118 LGX
C210931	CNS048P with 48 ULC adapters (8 six Packs) Splice Drawer (2-48 position) 118 LGX
FM000236	CNS048P with 24 PSF (dup) adapters (8 three Packs) Splice Drawer (2-48 position) 118 LGX
FM000237	CNS048P with 24 USF (dup) adapters (8 three Packs) Splice Drawer (2-48 position) 118 LGX
FM000238	CNS048P with 24 ASF (dup) adapters (8 three Packs) Splice Drawer (2-48 position) 118 LGX
FM000239	CNS048P with 48 MTRJ adapters (8 six Packs) Splice Drawer (2-48 position) 118 LGX

Note: All MM cable is 6.25µm unless otherwise specified

6U High Density Patch Splice Panels

Part Number	Configuration
FM000240	CNS096HD with 96 UST adapter (8 Twelve Packs) Splice Drawer (2-48 position) 118 LGX
FM000241	CNS096HD with 96 PST adapter (8 Twelve Packs) Splice Drawer (2-48 position) 118 LGX
C211594	CNS096HD with 48 UDL (dup) adapter (8 Six Packs) Splice Drawer (2-48 position) 118 LGX
C211558	CNS096HD with 48 PSF (dup) adapter (8 Six Packs) Splice Drawer (2-48 position) 118 LGX
C211601	CNS096HD with 48 PDL (dup) adapter (8 Six Packs) Splice Drawer (2-48 position) 118 LGX
FM000242	CNS096HD with 48 USF (dup) adapter (8 Six Packs) Splice Drawer (2-48 position) 118 LGX
FM000243	CNS096HD with 48 ASF (dup) adapter (8 Six Packs) Splice Drawer (2-48 position) 118 LGX

Note: All MM cable is 6.25µm unless otherwise specified

Accessories

Description	Part Number
Cable Clamp (Black)	C214522
Cable Clamp (White)	C210850
Telescoping Splice Drawer	911442-00-00

Connector / Adapter Key

Type	Description
ASC	Angle Polish SC (ZR) sleeve-SM
ASF	Angle Polish SC Duplex (ZR) sleeve-SM
PSC	Physical Polish SC (PB) sleeve-MM
PSF	Physical Polish SC Duplex (PB) sleeve-MM
USC (PB)	Ultra Polish SC with (PB) sleeve-SM
USC (ZR)	Ultra Polish SC with (ZR) sleeve-SM
USF	Ultra Polish SC Duplex (ZR) sleeve-SM
PST	Physical Polish ST (PB) sleeve-MM

Connector / Adapter Key continuation

Type	Description
UST	Ultra Polish ST (ZR) sleeve-SM
AFC	Angle Polish FC (ZR) sleeve-SM
PFC	Physical Polish FC (PB) sleeve-MM
UFC	Ultra Polish FC (ZR) sleeve-SM
ADL	Angle Polish LC Duplex (ZR) sleeve-SM
PDL	Physical Polish LC Duplex (PB) sleeve-MM
PLC	Physical Polish LC (PB) sleeve-MM
UDL (ZR)	Ultra Polish LC Duplex (ZR) sleeve-SM
UDL (PB)	Ultra Polish LC Duplex (PB) sleeve-SM
ULC	Ultra Polish LC (ZR) sleeve-SM

Select the seven digit part number of the panel you need, specify black or C.O. white, and choose the loading character desired.

Part Number	Color	Loading Character
<div style="border: 1px solid black; width: 150px; height: 30px; margin: 0 auto;"></div>	<div style="border: 1px solid black; width: 150px; height: 30px; margin: 0 auto;"></div> <div style="border: 1px solid black; width: 150px; height: 50px; margin: 0 auto; display: flex; flex-direction: column; align-items: center;"> <div style="width: 100%; text-align: left; padding: 2px;">W C.O. White</div> <div style="width: 100%; text-align: left; padding: 2px;">B Black</div> </div>	<div style="border: 1px solid black; width: 150px; height: 30px; margin: 0 auto;"></div> <div style="border: 1px solid black; width: 150px; height: 50px; margin: 0 auto; display: flex; flex-direction: column; align-items: center;"> <div style="width: 100%; text-align: left; padding: 2px;">L Loaded</div> <div style="width: 100%; text-align: left; padding: 2px;">U Unloaded</div> <div style="width: 100%; text-align: left; padding: 2px;">E Empty</div> </div>

Loaded: includes master plate, adapter plates, adapters, splice drawer (48 & up), pigtails with connectors, hardware, cable clamp.

Unloaded: includes master plate, adapter plates, adapters, splice drawer (48 & up), hardware, cable clamp.

Empty: includes master plate, mounting hardware, cable clamp

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96 Fiber Patch and Splice Panel

P/N: CNS096P

The CNS096P is a rack mountable fiber patch and splice panel designed to accommodate up to 96 fiber terminations (standard density) or 144 fiber terminations (high density) and up to 144 single fusion splices. The CNS096P provides a compact and versatile method of splicing and connectivity. Standard panels are available in empty, loaded and unloaded versions. Unloaded panels include adapter plates, adapters and splice drawers. Loaded panels also include pigtails (<3 Meters).

Specifications

- Telcordia GR-63 NEBS tested
- Aluminum Material per ASTM B209
- Central Office White, Black, Texture Powder Coated
- Universal Mounting Bracket - WECCO, EIA
- 19" and 23" rack compatible
- Fiber storage capacity - one meter per spliced fiber (3mm jacket)
- Uses two STF-48 splice drawers
- Two panel package - 4U patch, 3U splice
- Twelve 130mm LGX® positions
- Twelve 8-packs

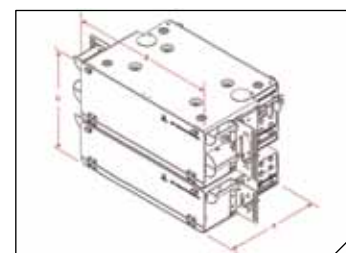
Depth (A) in Inches	Width (B) in Inches	Height (C) in Inches	Rack Units	Fiber Capacity
11	17	12.25	7	96

Standard Panel Ordering Information

7U Patch and Splice Panels (1-4U Patch, 1-3U Splice)

Part Number	Configuration
C210967	CNS072/96P- EMPTY 130 LGX
C210971	CNS096P with 96 UST adapters (12 Eight Packs) Splice Drawer (2-48 position) 130 LGX
C210976	CNS096P with 96 UFC adapters (12 Eight Packs) Splice Drawer (2-48 position) 130 LGX
C210982	CNS096P with 96 AFC adapters (12 Eight Packs) Splice Drawer (2-48 position) 130 LGX
C210985	CNS096P with 96 USC (ZR) adapters (12 Eight Packs) Splice Drawer (2-48 position) 130 LGX
C210989	CNS096P with 96 ASC adapters (12 Eight Packs) Splice Drawer (2-48 position) 130 LGX
FM000257	CNS096P with 96 MTRJ adapters (12 Eight Packs) Splice Drawer (2-48 position) 130 LGX

Note: All MM cable is 6.25µm unless otherwise specified



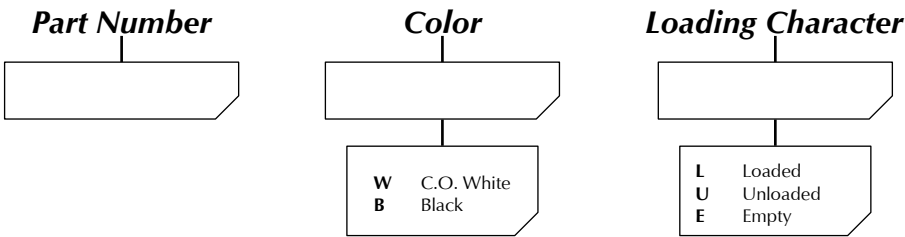
Accessories

Description	Part Number
Cable Clamp (Black)	C214522
Cable Clamp (White)	C210850
Telescoping Splice Drawer	911442-00-00

Connector / Adapter Key

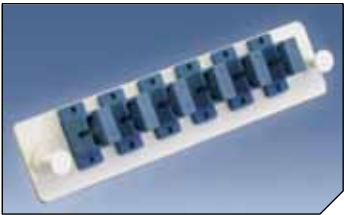
Type	Description
ASC	Angle Polish SC (ZR) sleeve-SM
ASF	Angle Polish SC Duplex (ZR) sleeve-SM
PSC	Physical Polish SC (PB) sleeve-MM
PSF	Physical Polish SC Duplex (PB) sleeve-MM
USC (PB)	Ultra Polish SC with (PB) sleeve-SM
USC (ZR)	Ultra Polish SC with (ZR) sleeve-SM
USF	Ultra Polish SC Duplex (ZR) sleeve-SM
PST	Physical Polish ST (PB) sleeve-MM
UST	Ultra Polish ST (ZR) sleeve-SM
AFC	Angle Polish FC (ZR) sleeve-SM
PFC	Physical Polish FC (PB) sleeve-MM
UFC	Ultra Polish FC (ZR) sleeve-SM
ADL	Angle Polish LC Duplex (ZR) sleeve-SM
PDL	Physical Polish LC Duplex (PB) sleeve-MM
PLC	Physical Polish LC (PB) sleeve-MM
UDL (ZR)	Ultra Polish LC Duplex (ZR) sleeve-SM
UDL (PB)	Ultra Polish LC Duplex (PB) sleeve-SM
ULC	Ultra Polish LC (ZR) sleeve-SM

Select the seven digit part number of the panel you need, specify black or C.O. white, and choose the loading character desired.



Loaded: includes master plate, adapter plates, adapters, splice drawer (48 & up), pigtails with connectors, hardware, cable clamp.
Unloaded: includes master plate, adapter plates, adapters, splice drawer (48 & up), hardware, cable clamp.
Empty: includes master plate, mounting hardware, cable clamp

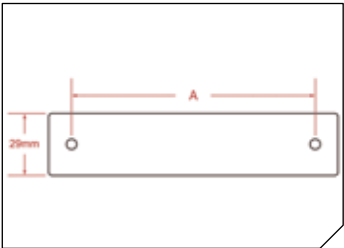
LightLink™ Adapter Plates



LightLink Adapter Plates add versatility to the AFL Telecommunications' panel product line. Adapter plates are compatible with industry standard platforms allowing for easy upgrades of existing panels. Adapter Plates come preloaded and are available in 6, 8, and 12 pack versions.

Features

- Metal Plate with Nylatches
- Polyurethane powder coated (CO white or Black)
- LGX® compatible



DIMENSION A
118mm LGX®
130mm LGX®

CAPACITY	STYLE
-	Blank
3	SC Duplex
6	SC Duplex
6	SC Simplex
8	SC Simplex
12	SC Simplex
6	FC Simplex
8	FC Simplex
12	FC Simplex
6	ST Simplex
8	ST Simplex
12	ST Simplex
3	LC Simplex
3	LC Duplex
6	LC Duplex
12	LC Duplex
6	MTRJ

Rack Mount Splice Enclosures 3U and 4U



Features

- Each splice tray holder accepts two (2) splice trays
- 1435839 or 559433 splice trays (not included)
- Splice tray holders are located in front of unit allowing cable storage in rear
- Removable rear and clear front covers for easy access and installation
- Clear front cover
- Edge guard on front cable entry for cable assembly protection
- Fits standard TIA 19" and 23" racks



Description		Part Number
3U	3 Splice Tray Holders	559089-2
4U	4 Splice Tray Holders	1435990-2

Insert Type	Fiber Count max.	Splice Tray Holder Capacity (Splice trays)
3U Fiber Density	72	6
4U Fiber Density	96	8

Splice Trays and Accessories for 3U and 4U Rack Mount Splice Enclosures

Features

- Hold up to 12 splices each
- Used with 2U, 3U, and 4U Rack Mount Spice Enclosures
- Accommodates both through (in-line) and end (butt) splice configurations
- Black anodized aluminum construction for durability and clear plastic top for improved fiber visibility
- Each splice tray includes clear plastic cover, end caps for fiber retention, and splice holders as listed
- 559433 splice tray holders found in the page 30.

Splice Trays with Splice Holders

Description	Figure	Included Splice Holder	Part Number
Splice Tray	A	Fusion with sleeve & Elastomeric	1435839-1
	B	CORELINK	1435839-2
	C	Universal	1435839-3
	D	Mechanical	1435839-4



Rack Mount Splice and Patch Enclosures, 2U (3.50-inch)



Features

- Accepts:
 - Up to three (3) Snap-in Adapter Plates (see pages 60 to 62 - chapter, Management Passive Devices / LAN Customer Premises) or MPO Cassettes (see this Chapter page 33)
 - Up to six (6) 559433 splice trays (see splice accessories table below)
- Removable front and rear covers for easy access and installation
- Front and rear cable management rings
- Edge guard on front cable entries for cable assembly protection
- Forward, flush or recessed mounting
- Fits standard TIA 19" and 23" racks
- Specially designed to hold armored or multiple trunk cables in place
- Large side or rear cable entry features tie down brackets that can be mounted inside or outside of enclosure
- A splicing shelf is located over adapter plates
- Designed as a drawer for easy access

Description	Part Number
Rack Mount Splice and Patch Enclosures, 2U (3.50-inch)	1435652-1

Fiber Density/Splice Tray Capacity

Insert Type	Fiber Count (max)	Splice Tray Holder Capacity (splice trays)
6-Fiber Adapter Plates	18	9
12-Fiber Adapter Plates or MPO Cassettes	36	18
24-Fiber Adapter Plates or MPO Cassettes	72	36
Spliced Fiber Capacity	72	-
Splice Tray Holder Capacity	6	-

Splice Accessories for Rack Mount Splice and Patch Enclosure

Features

- Can mix and match splice trays
- Splice trays hold up to 12 fusion, elastomeric, or mechanical splices (select appropriate part number)
- Black anodized aluminum construction for durability and improved fiber visibility
- Each splice tray includes clear plastic cover, end caps for fiber retention, and appropriate splice holders



Description	Figure	Included Splice Holder	Part Number
Splice Tray	A	Fusion	559433-2
	B	Elastomeric & Fusion with Sleeve	559433-3
	C	CORELINK	559433-4

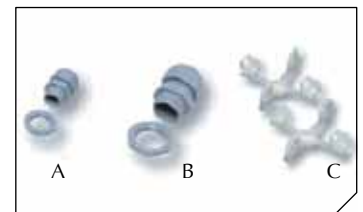
Rack Mount Fiber Management Enclosures

Features

- Holds excess loops of fiber cable or patch cords
- Drawer style
- Cable Management loops included
- 2U (3.50")

Accessories for Rack Mount Enclosures

Description	Cable Diameter	Figure	Part Number
Cable Strain Relief	3.5 - 8mm	A	1206144-1
Cable Management Ring Kit	9 - 14mm	B	1206145-1
	-	C	1206146-1



CABLE SYSTEM FOR DATA CENTER/MPO

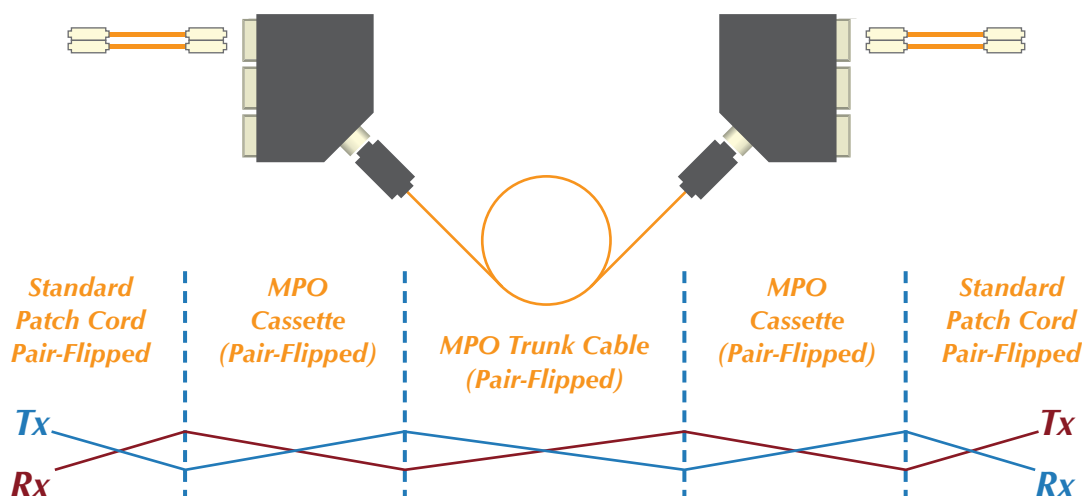
When you have requirements for high density fiber optic cable, MPO (Multi-fiber Push-On) is the solution.

With a concentration of up to 12 fibers in a single connector, MPO provides significant advantages in cabling administration tasks as well as space savings in your systems racks.

MPO and PARA-OPTIX Polarity



System Polarity with MPO Pair-Flipped AB/BA Trunk Cable



PARA-OPTIX Backbone Enclosure Kit



Features

- 1U high rack mounted enclosures
- Pre-installed cable management
- High density saves space and installation time
- Each enclosure provides 36 LC Duplex Connectors to a single 72 fiber MPO connector interface using XG (850nm LO 50/125 μ m) fiber.

Kit Includes:

- 1 Pair-Flipped AB/BA PARA-OPTIX Enclosure.

Description	Part Number
PARA-OPTIX Trunk Assembly	1919547-1

MPO Trunk Cable Assemblies



Features

- Trunk cable fiber polarity is Pair-Flipped AB/BA (see polarity diagram this Chapter page 31)
- Pulling socks protect MPO terminations during installation
- Twelve (12) fibers per MPO plug
- Trunk cables come pre-tested and ready for installation
- 12 and 24 fiber MPO Trunk cables meet or exceed the requirements of GR-409-CORE and UL/NEC rating for Riser and Plenum applications.
- Plenum Cables can be used in riser spaces
- Custom counts and lengths are available

Description	Fiber Type	UL/NEC Ratings	Jacket Color	Part Number
12-Fiber, Pair-Flipped (AB/BA)	50/125 μ m	Plenum (OFNP)	Orange	6435028-X
		Riser (OFNR)		
	XG (850 nm LO 50/125 μ m)	Plenum (OFNP)	Aqua	1907404-X
		Riser (OFNR)		
	62.5/125 μ m	Plenum (OFNP)	Orange	6435024-X
		Riser (OFNR)		
	Single-mode	Plenum (OFNP)	Yellow	6435070-X
		Riser (OFNR)		
24-Fiber, Pair-Flipped (AB/BA)	50/125 μ m	Plenum (OFNP)	Orange	6435029-X
		Riser (OFNR)		
	XG (850 nm LO 50/125 μ m)	Plenum (OFNP)	Aqua	1754687-X
		Riser (OFNR)		
	62.5/125 μ m	Plenum (OFNP)	Orange	6435025-X
		Riser (OFNR)		
	Single-mode	Plenum (OFNP)	Yellow	6754882-X
		Riser (OFNR)		

X denotes length in feet: -1 = 10, -2 = 20, -3 = 30, -4 = 40, -5 = 50, -6 = 60, -7 = 70, -8 = 80, -9 = 90, 1-0 = 100, 1-1 = 110, 1-2 = 120, 1-3 = 130, 1-4 = 140, 1-5 = 150, 1-6 = 160, 1-7 = 170, 1-8 = 180, 1-9 = 190, 2-0 = 200, 2-1 = 210, 2-2 = 220, 2-3 = 230, 2-4 = 240, 2-5 = 250, 2-6 = 260, 2-7 = 270, 2-8 = 280, 2-9 = 290, 3-0 = 300

CABLE SYSTEM FOR DATA CENTER/MPO

MPO Trunk Cable Assemblies continuation

Description	Fiber Type	UL/NEC Ratings	Jacket Color	Part Number
72-Fiber, Pair-Flipped (AB/BA)	50/125 µm	Plenum (OFNP)	Orange	6435031-X
		Riser (OFNR)		6435039-X
	XG (850 nm LO 50/125 µm)	Plenum (OFNP)	Aqua	1828803-X
	62.5/125 µm	Plenum (OFNP)	Orange	6435027-X
		Riser (OFNR)		6435035-X

X denotes length in feet: -1 = 10, -2 = 20, -3 = 30, -4 = 40, -5 = 50, -6 = 60, -7 = 70, -8 = 80, -9 = 90, 1--0 = 100, 1--1 = 110, 1--2 = 120, 1--3 = 130, 1--4 = 140, 1--5 = 150, 1--6 = 160, 1--7 = 170, 1--8 = 180, 1--9 = 190, 2--0 = 200, 2--1 = 210, 2--2 = 220, 2--3 = 230, 2--4 = 240, 2--5 = 250, 2--6 = 260, 2--7 = 270, 2--8 = 280, 2--9 = 290, 3--0 = 300

MPO Optical Fiber Cassettes

Features

- Cassette fiber polarity is Pair-Flipped (AB/BA)
- Cassettes have one MPO connection (12-Fiber) or two MPO connections (24-Fiber) on the back of each cassette
- Highest density option uses small form factor connectors (MT-RJ or LC)
- Cassettes house one or two MPO 12-fiber break-out assemblies
- Cassettes have same footprint as Snap-in Adapter Plates mount in all AMP NETCONNECT enclosures that accept Snap-in Adapter Plates
- Factory tested and ready for installation



Description	Fiber Type	Fiber Count	Duplex Port Count	Adapter Color	Figure	Part Number
MT-RJ	50/125 µm	12	6	Black	-	6754286-1
		24	12	Black	-	6754288-1
	XG (850 nm LO 50/125 µm)	12	6	Aqua	-	1918777-1
		24	12	Aqua	-	1918778-1
	62.5/125 µm	12	6	Beige	-	6754285-1
		24	12	Beige	A	6754287-1
	Single-mode	12	6	Blue	-	1938996-1
		24	12	Blue	-	6828819-1
SC	50/125 µm	12	6	Black	-	6435181-2
	XG (850 nm LO 50/125 µm)	12	6	Aqua	-	6754333-2
	62.5/125 µm	12	6	Black	-	6435180-2
	Single-mode	12	6	Blue	B	6435069-2
ST	50/125 µm	12	6	Black	C	6435067-2
	62.5/125 µm	12	6	Black	C	6278418-2
LC	50/125 µm	12	6	Black	-	1918779-1
		24	12	Black	-	1918780-1
	XG (850 nm LO 50/125 µm)	12	6	Aqua	-	1918783-1
		24	12	Aqua	-	1918784-1
	62.5/125 µm	12	6	Beige	D	1918781-1
		24	12	Beige	E	1918782-1
	Single-mode	12	6	Blue	-	1938056-1
		24	12	Blue	-	1918786-1



WALL SEALING SYSTEM

Raychem



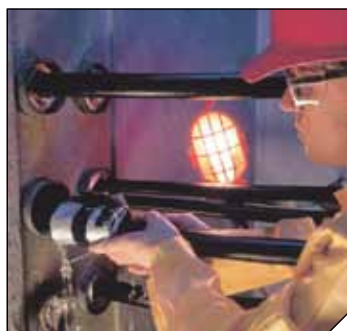
TDUX

Inflatable Sealing System for Telephone Cable Ducts for Underground Applications

TDUX is a unique inflatable wraparound duct seal system permanently sealing telephone cable ducts, preventing leakage of water from the duct into exchange vaults or manholes. It has been developed for use in conjunction with plastic, concrete or steel ducting wall feedthrough systems. It is suitable for use with polyethylene or lead-jacketed cables.

Features

- Fast and easy to install, even in congested enclosures.
- Very flexible and reliable wraparound sealing system.
- Independent of duct or cable ovality.
- Wide application cable range with one size.
- Seals vacant ducts and ducts with one or more cables.
- Can be installed while water is flowing out of the duct.
- Water and airtight up to 50 kPa.
- Environmentally friendly and non-toxic.
- Resistant to chemicals and bacteria.
- Easy and fast removal.
- Different sizes are available, sealing a wide variety of ducts and cables.



Product description	Application range: TDUX will seal vacant ducts and ducts occupied with 1 or 2 cables*			
	Duct inside diameter range		Corresponding outside diameter range for 1 cable or sum of 2 cables	
	min	max	in min. duct	in max. duct
TDUX-35	25	35	0-12	0-25
TDUX-45	32,5	45	0-14	0-32
TDUX-60	45	60	0-18	0-45
TDUX-75	55	75	0-28	0-56
TDUX-90	60	100	0-22	0-83
TDUX-100	75	110	0-45	0-90
TDUX-125	110	125	0-83	0-103

* To seal ducts occupied with more than 2 cables, TDUX-CL clips are available as separate items. Contact your local sales engineer for more specific information.

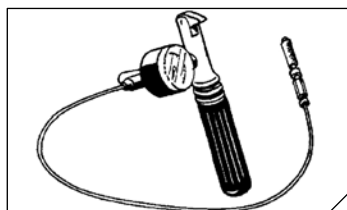
TDUX Installation tools

TDUX duct seals can be installed with a wide variety of inflation tools, having the capability to inflate TDUX to ± 0.2 bar of pressure

P/N: TDUX-IT-16

Inflation tool using CO2 gas cylinders.

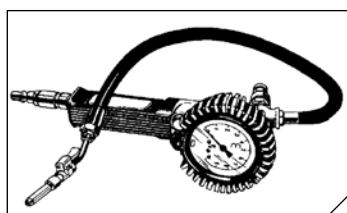
The tool is designed with an ON/OFF switch and has an automatic pressure monitoring system to guarantee the required inflation pressure of $3,0 \pm 0,2$ bar.



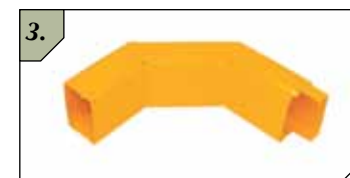
P/N: TDUX-IG-SR-AS

Inflation gun to be connected to a pressurised air bottle, pump or compressor, having an outlet pressure of 4 to 10 bar to feed the inflating gun.

The inflating gun is designed with a safety relief valve and audio signal device to facilitate the installation.



Cable Management Duct with Smooth Cover (Screw or Pressure Types)					
Figure	Duct	Height	Length	Caliber	Finish
1	8 cm	5 cm	Up to 240 mts	20 & 22	Electrostatic Painting
	8 cm	4 cm	Up to 240 mts	20 & 22	Electrostatic Painting
	10 cm	5 cm	Up to 240 mts	21 & 22	Electrostatic Painting
	10 cm	4 cm	Up to 240 mts	22 & 22	Electrostatic Painting
	12 cm	5 cm	Up to 240 mts	23 & 22	Electrostatic Painting
	12 cm	4 cm	Up to 240 mts	24 & 22	Electrostatic Painting



Cable Management Duct Accessories					
Figure	Accessories	Width	Height	Caliber	Finish
2	Horizontal Bending	8 cm ,10 cm & 12 cm	4 cm & 5 cm	20 & 22	Electrostatic Painting
3	Internal Vertical Bending	8 cm ,10 cm & 12 cm	4 cm & 5 cm	20 & 22	Electrostatic Painting
4	External Vertical Bending	8 cm ,10 cm & 12 cm	4 cm & 5 cm	21 & 22	Electrostatic Painting
5	Horizontal "T"	8 cm ,10 cm & 12 cm	4 cm & 5 cm	22 & 22	Electrostatic Painting
6	Vertical "T"	8 cm ,10 cm & 12 cm	4 cm & 5 cm	23 & 22	Electrostatic Painting
7	Reduction	8 cm ,10 cm & 12 cm	4 cm & 5 cm	24 & 22	Electrostatic Painting
8	Cross	8 cm ,10 cm & 12 cm	4 cm & 5 cm	25 & 22	Electrostatic Painting

Ladder Type Cable Management Tray					
Figure	Height	Width	Length	Caliber	Finish
9	5 cm & 8 cm	10 cm	Up to 240 mts	16/18 & 18/18	Electrostatic Painting

Ladder Type Cable Management Accessories				
Accessories	Width	Height	Caliber	Finish
Horizontal Bending	10 cm	5 cm & 8 cm	16/18 & 18/18	Electrostatic Painting
Internal Vertical Bending	10 cm	5 cm & 8 cm	16/18 & 18/19	Electrostatic Painting
External Vertical Bending	10 cm	5 cm & 8 cm	16/18 & 18/20	Electrostatic Painting
Horizontal "T"	10 cm	5 cm & 8 cm	16/18 & 18/21	Electrostatic Painting
Vertical "T"	10 cm	5 cm & 8 cm	16/18 & 18/22	Electrostatic Painting
Reduction	10 cm	5 cm & 8 cm	16/18 & 18/23	Electrostatic Painting

Raychem

Fiber Optic Splice Closures / FOSC-400



Fiber-Optic Splice Closures (FOSC-400) feature a unique sealing system engineered specially for fiber-optic applications.

Cable seals use a Raychem heat-shrinkable sleeve and hot-melt adhesive system that is installed with a hot-air gun. The product can be used in any environment (aerial, buried, handhole, manhole) and in many applications (expressed, tap-off, branch, and repair).

Features

- Single-ended thermoplastic closure
- Base and dome sealed with clamp and O-ring system
- One oval entry port for looped cable
- Up to eight round ports for single cable entry/exit
- Heat-shrink cable seals
- Available in three sizes with capacity up to 864 fusion splices
- Compatible with most cable types (single fiber or ribbon) and cable constructions (loose tube, central core, slotted core)

FOSC-400 Description



Dome

The dome is made from a polymer, ribbed for extra strength.

Base

The base provides the foundation for the splicing trays. A number of round ports (quantity depends on the closure size) and one oval port for cable entry/exit are provided in the base.



Dome to base seal

This seal consists of a mechanical clamp and a rubber O-ring.



FOSC tray tower

A mounting bracket is provided onto which the splicing trays are hinged.



Cable strength member fixation point

The central strength member of each individual cable can be attached at this point.

Ground feed-through

A sealed grounding feed-through bolt can be pre-mounted in the base to connect metallic components to an external ground.



Flash test valve

This is pre-mounted in the dome if pressure access is required.



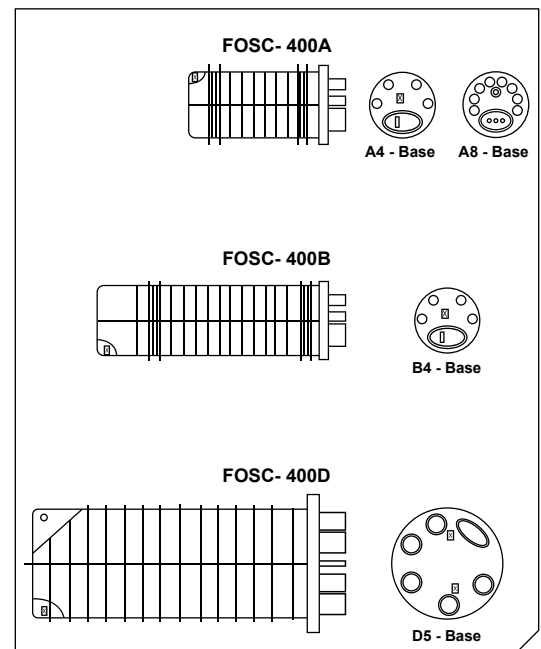
Closure	Spliced Fiber Storage Capacity			Slack Storage Capacity		
	Single Fusion	Single Mechanical	Mass Fusion	Buffer Tubes	Stranded Fibers	12 Fiber Ribbons
FOSC 400 A4	48	24 (*)	24	8	96	6
FOSC 400 A8	96	48	288	6	96	24
FOSC 400 B4	96	48 / 60(**)	288	6	96	24
FOSC 400 D5	576	288	1152	18	96	72

Closure	Dimensions in (mm)		
	Total Closure Length	Closure Outer Diameter	Closure Outer Diameter Including Camp
FOSC 400 A4	420	183	205
FOSC 400 A8	410	183	205
FOSC 400 B4	540	183	205
FOSC 400 D5	710	267	290

(*) Varies with splice type. Capacity is 24 for most commonly used mechanical splices.

(**) With special tray tower for 6 trays.

Note: Different configurations are possible, depending upon the application, Microlink's sales department will provide you full product information.



FOSC-400 Accesories Included

- Dome Clamp O-ring
- Base including a tray tower to hold the splicing trays
- FOSC trays (1). Smouvs not included.
- Transportation tubes with tie wraps (part of tray kit)
- 1 oval port seal kit



FOSC-400 Optional Accessories



Tubular cable seal kit for round ports

Cable seal kit to seal cables in the round ports.

P/N: FOSC-A-CSEAL-1NT (incl. strength member fixation) (for A4)

P/N: FOSC-A8-CSEAL-1NT (incl. strength member fixation) (for A8 size)

P/N: FOSC-B/D-CSEAL-1NT (strength member fixation is premounted on the closure) (for B size)

Tubular cable seal kit for oval ports

Cable seal kit to seal two cables in oval outlet port.

P/N: FOSC-A-CSEAL-2NT (incl. strength member fixation)

P/N: FOSC-B/D-CSEAL-2NT



Wraparound cable seal kit for round ports

P/N: FOSC-CSEAL-1NW (for all sizes)

Wraparound cable seal kit for oval ports

P/N: FOSC-CSEAL-2NW (for all sizes)

This wraparound version are used in case of re-entry/repair.

FOSC-400 Tools



P/N: FACC-HEAT-GUN-220V

1460W, 220V hot air gun to shrink the cable seals. (The kit includes a hot air gun reflector).

P/N: FACC-HEAT-GUN-110V

1460W, 110V hot air gun to shrink the cable seals. (The kit includes a hot air gun reflector).



P/N: FACC-S-HOT-AIR-TORCH

Sievert hot air gas torch kit including handle and nozzle used to shrink the cable seals when only gas is available.

Fiber Optic Splice Closures / FOSC-500AA



The Slim In-Line Closures (FOSC-500AA) are used in the low fiber count part of the outside plant network. They are cold-applied, reusable systems, housing one mass splicing tray and cable attachment units.

They are typically used for customer drops, tap-offs (taut sheath) and in-line splice applications.

The wrap-around thermoplastic body consists of two hingeable shells that are sealed with an O-ring system and that can easily be closed using latches. One mass splicing tray and cable attachment units are provided at the inside.

Features

- In-line thermoplastic closure
- Four cable ports, two on each side
- Cable sealing based on gel technology (2 knobs for gel compression)
- Easy re-entry and re-closure
- Compatible with most cable constructions (loose tube, central core, slotted core)

FOSC - 500AA - XXX XX - X X

Splicing tray

S24 Splicing tray ohdold 24 SMOUV's (45mm)
S48 Splicing tray to hold 48 SMOUV's (45mm)

Cable type

LT Loose tube cable

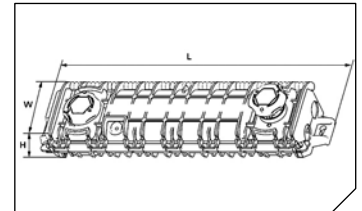
Valve for flash test

V With Valve

Ground feed-through

G With ground feed-through

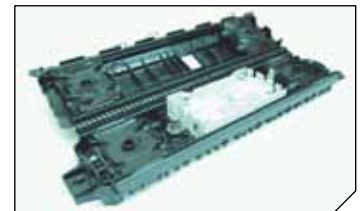
	FOSC-500AA
Dimensions (in mm)	
Length (without mounting parts)	422
length (with mounting parts) (L)	472
Height (H)	65
Width (W)	125
Splicing capacity (in # fibers)	
Number of splicing trays	1
Number of splices	24 / 48 Fibers
Cable ports	
Number of cable ports	2+2
Cable diameter range	5-15 mm



FOSC-500AA Description

Body

The body consists of 2 hingeable parts (bottom an top), made from a thermoplastic material.



Splicing area

A splicing tray is pre-mounted in the bottom part of closure. Two splice holders are mounted on splicing steps so that uncut fibers can be stored beneath the splice holders.

The splicing tray is covered with a tray lid.



Cable attachment

The external cable strain relief devices grip the cable jacket. One device can hold 2 cables.

Cable attachment brackets are udes to terminate the strength members (type of brackets is related to the cable type).



AERIAL AND UNDER-GROUND USAGE



Closing/sealing mechanism

A longitudinal o-ring seals the bottom and top part of the closure, which are closed using 7 latches



Cable sealing is provided by gel under compression. Gel is enclosed in the body at the cable ports and is put under pressure by turning the two knobs on the top part of the closure.

FOSC – 500AA Accessories included

- Valve for flash test
- Grounding kit
- Entry cable accessories (In / Out)
- Splice trays (2). With out smouvs

FOSC-500AA Optional Accessories



Cable attachment kit for loose tube cable

P/N: FOSC-500AA-AC-LT

This kit is used to attach the strength member of 1 loose tube cable

Smouvs

(See Consumables Chapter. page 90)

Fiber Optic Splice Closure / FOSC-500B



The Cold Applied In-Line Closures (FOSC-500B) are used in the outside plant network. They are cold-applied, reusable systems, housing mass splicing trays and cable attachment units

They are typically used for repair, tap-off (taut sheath) and in-line splice applications.

The wrap-around thermoplastic body consists of two half shells which are sealed with an O-ring system. Inside, a metal basket houses cable attachment units and FOSC splicing trays. They can be provided with different types of splice holders. Cut-to-fit axial pull tapes provide mechanical cable retention.

Features

- In-line thermoplastic closure
- Two cable ports on one side, four on the other
- Cable sealing based on gel tape technology
- Easy re-entry and re-closure
- Compatible with most cable types (single fiber or ribbon) and cable construction (loose tube, central core, slotted core, modular)

FOSC - 500B - XXX - X - X - X - X

Splicing tray

S16 Tray for 16 stacked fusion splices

S24 Tray for 24 stacked fusion splices

Number of organizer trays in kit

Select value between 0 and 6 (Maximum 4 in case of tap-off and storage applications)

(*) **Branch-off on a straight cable:** No cable slack on mainly used for acces in initially unplanned areas.

(**) **Storage of uncut loose tubes:** In the application, a storage area is foreseen under the trays to store uncut loose tubes.

Valve for flash test

V With Valve

Ground feed-through

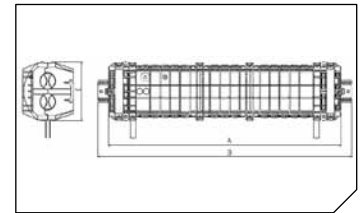
G With ground feed-through

Closure application

I Standar (In-line)
T Tap-off (taut sheath)(*)
S Storage of uncut loose tubes (**)

FOSC-500B

Dimensions (in mm)	
Length (without mountning parts) (A)	636
length (with mountiong parts) (B)	648
Height	100
Width (C)	160
Splicing capacity (in # fibers)	
Number of splicing trays	6
Splice tray holding 24 splices	144 Fibers
Splice tray holding 16 splices	96 Fibers
Cable ports	
Number of cable ports	2+4
Cable diameter range	7-40 mm



FOSC-500B Description

Body

The body consists of 2 hingeable parts (bottom and top), made from a thermoplastic material.

Splicing area

A basket accepting FOSC A splicing trays has to be mounted in the bottom part of the closure.

Cable attachment

A cable termination unit provides clamping of the cable and strength member attachment.

Cable sealing

Cable sealing is provide by a gel tape that is wrapped around the cable.

Closing/ Sealing mechanism

A longitudinal o-ring seals the bottom and top part of the closure, which are closed with nuts and bolts.

Ground feed-through

A grounding feed-through bolt can be pre-mounted in the base.



FOSC – 500B Accessories included

- Valve for flash test
- Grounding kit

FOSC-500B Optional Accessories



Cable seal kit / Re-entry kit for adding or replacing 1 cable

P/N: FOSC-500B-CSeal-01

Kit content:

- Gel-sealing tape
- Axial pull tape
- Measuring tape
- Cable attachment unit

Generic Closure Organizer FIST-GCO2



The Generic Closure Organizer (FIST-GCO2) is an environmentally sealed enclosure for the fiber management system that provides the functions of splicing and passive component integration in the external network.

The product can be tailored to almost any required configuration by adding splicing and/or passive device sub-assemblies.

The UMS (Universal Mounting System) profiles provide the fundation for mounting combinations of FIST-SOSA2 and/or FIST-SASA2 modules. (see Central Office chapter - pages 18 to 19)

Features

- Single-ended thermoplastic closure
- Base and dome sealed with clamp and O-ring system
- One oval entry port for looped cable
- Six round ports for single cable entry/exit
- Heat-shrink cable seals
- Compatible with most cable types (single fiber or ribbon) and cable constructions (loose tube, central core, slotted core, modular)

FIST - GCO2 - XX X - X X

Closure Type

- BC 488 mm long with two 28 units UMS
- BD 566 mm long with two 42 units UMS
- BE 680 mm long with two 58 units UMS

Number of ports

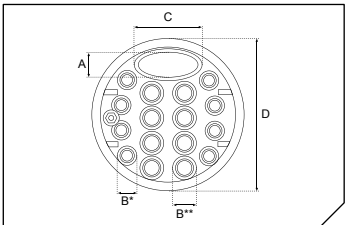
- 16 Round ports (8: diameter 20)
(8: diameter 13,5)

Valve for flash test

- V Pre-mounted flash test point in dome
- N No pressure relief valve

Ground feed-through

- G With ground feed-through
- N No ground feed-through



	GCO2-BC		GCO2-BD		GCO2-BE	
Closure Length (mm)	488		566		680	
A (mm)	30		30		30	
B* (mm)	20		20		20	
B** (mm)	13,5		13,5		13,5	
C (mm)	82		82		82	
D (mm)	247		247		247	
D with clamp (mm)	285		285		285	
	Fibers	Trays	Fibers	Trays	Fibers	Trays
Single circuit splicing capacity	112	56	160	80	224	112
Single element splicing capacity	336	28	480	40	672	56

FIST-GCO2 Description

Dome

The dome is made from a polymer, ribbed for extra strength.



Base

The base provides the foundation for the UMS profiles. Sixteen round and one oval port for cable entry/exit are provided in the base.



Dome to base seal

This seal consists of a mechanical clamp and a rubber O-ring.



UMS (Universal Mounting System) profiles

On the 2 UMS profiles, the wraparound groove plates can be clicked (See Central Office chapter - page 18). The capacity of the UMS profile is defined by the closure size.



FAS block

The window between the two FAS blocks is used to route fibers from one side of the FAS block to the other. Tube holders mounted on each side of the FAS block hold the loose tubes or spiral tubes in position.



FAS block cap

A FAS cap protects mechanically the fibers on the FAS block.

Provision has been made to store the tray wedge.



Tube holder

On every side of the FAS block, tube holders are provided to keep tubes coming from the cables in place. Twelve cavities provide a neat organization of the tubes. The total capacity depends on the tube diameter



AERIAL AND UNDER-GROUND USAGE



Retainers for tube holders

The retainers have to be slid into the tube holders. They are delivered in a set of 12. Spare retainers can be stored on the tray lid.



Expressed fiber storage area

The area between the UMS profiles is used to store uncut loose buffer tubes.

The looped cable is fed through the oval port.

For central core cable, storage baskets provide the necessary protection of the fibers.



Loose tube drop cable strength member fixation point

The central strength member of each individual cable can be attached at this point.



Ground feed-through (optional)

A sealed grounding feed-through bolt can be pre-mounted in the base to connect metallic components to an external ground.



Flash test valve (optional)

This is pre-mounted in the dome if pressure access is required.

FIST – GCO2 Accessories included

Depend of your needs, one of three options are available.



Oval port seal kit for single fiber loose tube

P/N: FIST-GCO2-OSK-LTS

Cable seal kit to seal two cables having a diameter range of 12-25 mm through the oval outlet port (numbered 1-2) of the FIST-GCO2.

Includes a plastic sleeve to store the uncut loose buffer tubes between the 2 UMS profiles.



Oval port seal kit for loose tube ribbon fiber

P/N: FIST-GCO2-OSK-LTR

Cable seal kit to seal two cables having a diameter range of 12-25 mm through the oval outlet port (numbered 1-2) of the FIST-GCO2.

Oval port seal kit for central core cable

FIST-GCO2-OSK-CC

Cable seal kit to seal two cables having a diameter range of 12-25 mm through the oval outlet port (numbered 1-2) of the FIST-GCO2.

Includes a metal bracket to terminate the two central core cables.



FIST-GCO2 Optional Accessories

The smouvs and the trays are not included in the FIST-GCO2 but you can order each one like an additional accessory

For information about Trays see Central Office chapter - pages 18 to 19

For information about Smouvs see Consumables chapter - page 90

Wraparound cable seal kit for oval ports

P/N: FOSC-CSEAL-2NW-S6073

A wraparound sleeve for an oval port that can be used in case of re-entry/repair.

Cable seal kits for the round port (6-round-port-base)

Single cable kits can be used when only one cable has to be terminated per drop port. Depending on cable construction, the following types can be ordered:



Round port seal kit for single fiber loose tube

P/N: FIST-GCO2-RSK-LTS

Cable seal kit to seal cables with a diameter range of 5-30 mm through the round ports (numbered 3-8) of the FIST-GCO2.

Includes a universal strength member termination kit.



Round port seal kit for loose tube ribbon

P/N: FIST-GCO2-RSK-LTR

Cable seal kit to seal cables with a diameter range of 5-30 mm through the round ports (numbered 3-8) of the FIST-GCO2.

Includes a universal strength member termination kit and spiral tubing.



Round port seal kit for central core

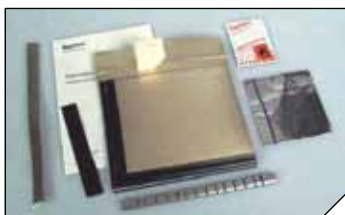
P/N: FIST-GCO2-RSK-CC

Cable seal kit to seal cables with a diameter range of 5-25 mm through the round ports (numbered 3-8) of the FIST-GCO2.

Includes a metal cable fixation bracket and spiral tube to terminate the central core cable.



AERIAL AND UNDER-GROUND USAGE



Wraparound cable seal kit for round ports

P/N: FOSC-CSEAL-1NW-S6073

A wraparound sleeve for a round port that can be used in case of re-entry/repair.

Multi drop cable kits allow to feed more than 1 cable through the round port in a flexible way.

In case that one cable is installed day one of the installation and further flexibility is needed to bring in 2 extra cables later on, the MULTI2-kits can be used. In a first stage, the cable is sealed together with 2 tubes; at a later stage, additional cable can be fed through these tubes.

When full flexibility is needed and no cables are installed on day one, the MULTI3-kits can be used. Note that these kits are only applicable for single fiber-loose tube cable.

Multi drop cable kit 2/9

P/N: FIST-GCO2-MULTI2/9

Multi drop cable kit for 1 cable and 2 tubes. Multi termination plate with one strength termination is included. Max. cable diameter for the first cable=14 mm; other cable (through tubes) can have a max. diameter of 9.5 mm.

Includes a multi-termination plate with one strength member fixation.

Multi drop cable kit 2/11

P/N: FIST-GCO2-MULTI2/11

Multi drop cable kit for 1 cable and 2 tubes. Multi termination plate with one strength termination is included. Max. cable diameter for the first cable=14 mm; other cable (through tubes) can have a max. diameter of 11.5 mm.

Includes a multi-termination plate with one strength member fixation.

Multi drop cable kit 2/12

P/N: FIST-GCO2-MULTI2/12

Multi drop cable kit for 1 cable and 2 tubes. Multi termination plate with one strength termination is included. Max. cable diameter for the first cable=12 mm; other cable (through tubes) can have a max. diameter of 12 mm.

Includes a multi-termination plate with one strength member fixation.



Multi drop cable kit 3/9

P/N: FIST-GCO2-MULTI3/9

Multi drop cable kit with 3 tubes. Max. cable dia.= 9.5 mm.

Multi drop cable kit 3/11

P/N: FIST-GCO2-MULTI3/11

Multi drop cable kit with 3 tubes. Max. cable dia.= 11.5 mm.



Multi seal

P/N: FIST-GCO2-MULTI-SEAL

Cable seal kit to seal the cable onto the tube

Multi strength member fixation kit

P/N: FIST-GCO-MULTI-UCT

Multi termination plate with 3 strength member fixations to be used with the MULTI3 kits.



Wall mounting kit standard

P/N: FIST-UNI-MOUNT-W

Mounting kit to hang FIST-GCO2 closures on a wall.



Wall mounting kit (16-round-port-base)

P/N: FIST-MOBRA-16-FIX

Bracket for mounting all GCO2 closure sizes (with 16-round-port-base) on a wall.

It is possible to work on the closure while it is mounted on this bracket.



AERIAL USAGE

Outdoor Fiber Distribution Box / FIST-TAP-200

This FIST-TAP-200 closure is a re-enterable in-line splice closure for fiber optic cables. It provides mechanical and environmental protection for fiber optic splices and permits easy access by the customer. The enclosure is suitable for aerial applications. The closure can handle looped cable by storing the fibers as uncut bare fibers. It has at both sides 1 main cable and 4 drop cable ports. The cable sealing is accomplished using gel technology.

Features

- Easy open and closed system
- Special tools not required
- Easy access to addition of new lines
- A maximum curvature radius of 30mm is guaranteed
- Eight ports available for drop cable and two ports for main cable

Width	Depth	Height	Up to 10 cables			
			Main cable (2)		Drop cable (8)	
			Max D	Min D	Max D	Min D
272 mm	310 mm	81 mm	(0.5")	(0.35")***	(0.3")*	(0.12")**

* Maximum outer jacket 8 mm (0.3")

Maximum inner jacket 5,5 mm (0.2")

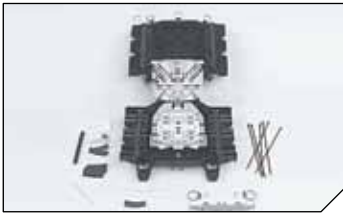
** In case no cable is brought into the closure, installed plugs are included.

*** In case there is only one main cable brought into the closure, the other port will be closed with the enclosed rod.

Raychem



FIST – TAP – 200 Accessories included



Kit content

- Closure:
 - Base tray
 - 12 Fusion (or mechanical) tray
 - Tray cover
 - Grounding bolt and seals premounted
- Termination and seal kit (for 2 main cables)
- Rod to seal main cable port (in case of only one main cable)
- Installation instruction

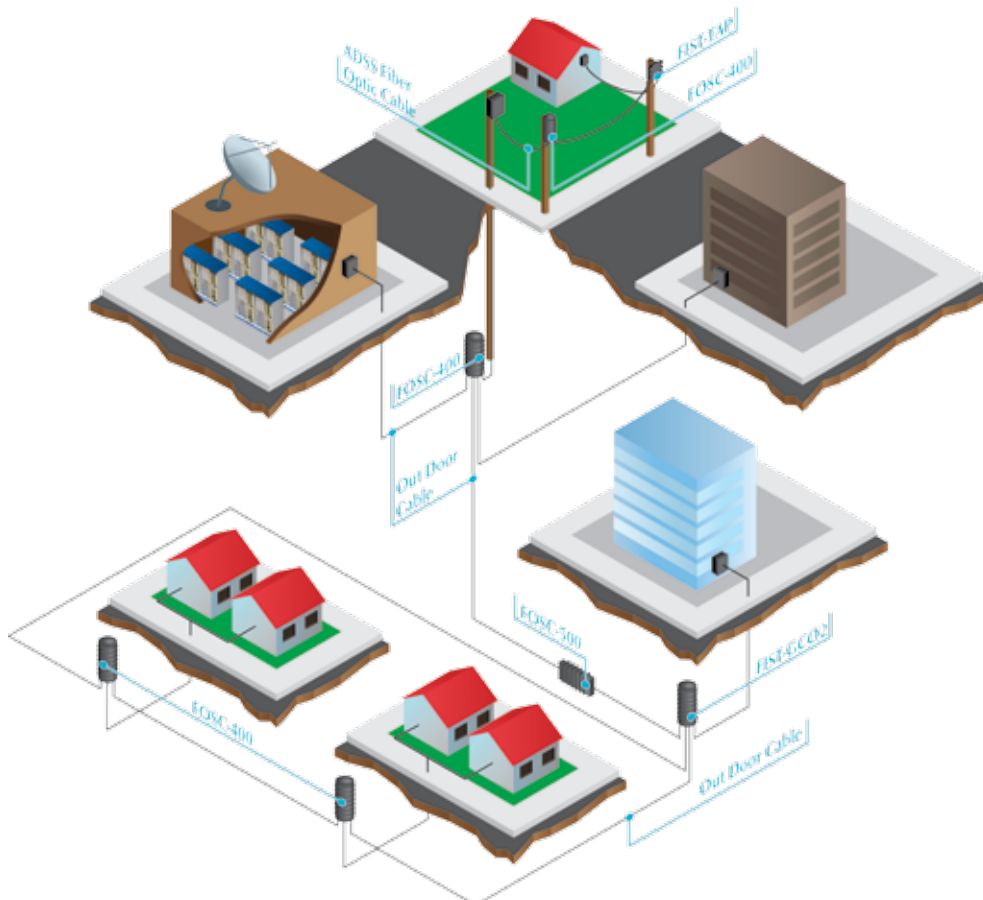
FIST – TAP – Mounting Drop Kit 200 Optional Accessories



P/N: FIST-TAP-200-CS-S1589

Termination and seal kit for one drop cable.

Outside Plant Devices Typical Application



Generic Fiber Termination Box / FIST-GB2

Raychem

This Generic Fiber Termination Box provides a wall-mountable environmental and mechanical protection for the FIST fiber management system that includes the functions of splicing, patching and passive component integration.

Features

- Typically mounted on a wall inside the customer's premises
- Can be used in outdoor above-ground applications
- Meets cable termination and sealing requirements
- One oval entry port for looped cable management
- Compatible with most cable types (single fiber or ribbon) and cable construction (loose tube, central core)
- Splicing and patching facilities
- Patch panel compatible with all types of connectors



FIST - GB2 - XX - X X

Box size

- 12** Typically capacity of 12 connectors
- 24** Typically capacity of 24 connectors
- 36** Typically capacity of 36 connectors
- 48** Typically capacity of 48 connectors

Application

- T** Terminating cable to pigtail

Outer cover locking options

- A** No lock (i.e. only quarter-turn screws)

		GB2-12		GB2-24		GB2-36		GB2-48	
Dimensions	Height (mm)	387		455		530		600	
	Width (mm)	372		372		372		372	
	Depth (mm)	176		176		176		176	
Splicing cable to pigtails using KTU's		Fibers	Trays	Fibers	Trays	Fibers	Trays	Fibers	Trays
Single circuit splicing capacity		16	8	24	12	48	24	72	36
Splicing cable to pigtails using connector adapters		Connectors		Connectors		Connectors		Connectors	
		12		24		36		48	

FIST-GB2 Description

Base and Cover

The FIST-GB2 consists of a base and a cover made from an engineering polymer.

The cover is secured to the base by two quarter turn screws.

A rubber gasket seals the cover to the base.



UMS profile

On the UMS profiles, the wraparound groove plates of the SOSA's can be clicked. The capacity of the UMS profile is defined by the box size (see Central Office chapter - page 18).



NETWORK TERMINATION



FAS block and FAS cap

A FAS block routes fiber in a controlled way to the appropriate splicing trays.

Two different types are available:

- In the GB2-12, a small FAS block is installed.
- In the other sizes a larger FAS block is installed, allowing for additional flexibility.

A FAS cap protects mechanically the fibers on the FAS block.



Patch panel

The patch panel can accept different optical connector types for patch cords (e.g. SC/PC) or pigtail strain relief devices (KTUs). The patch panel is installed in the T versions (cable to pigtail) only. A pigtail duct guides the secondary coated pigtail from the patch panel to the pigtail routing block.

Other characteristics:

- Identification labels for patch panel
- Tube holders
- Retainers for tube holders
- Oval port
- Round ports
- Pigtail routing block

For more information, please contact Microlink's technical department

FIST-GB2 Accessories Included

- Box only (empty), no accessories included

FIST-GB2 Optional Accessories

The smouvs and the trays are not included in the FIST-GB2 but you can order each one like an additional accessory.

- For information about trays see Central Office chapter - pages 18 to 19
- For information about smouvs see Consumables chapter - page 90

Oval port seal kit for loose tube - single fiber cable

P/N: FIST-GB2-OSK-LTS01

Cable seal kit to seal two cables having a diameter range of 12-25 mm through the oval outlet port of the FIST-GB2. Includes a plastic strain relief bracket for the fixation of the central strength member of the cable.



Pigtail seal – 24 pigtails

P/N: FIST-GB-PTS24-01

Pigtail seal PG29 to seal up to 24 single fiber pigtails with a diameter range of 0 - 3.0 mm.



Pigtail seal – 6 pigtails

P/N: FIST-GB-PTS6X4-PG21-01

Pigtail seal PG 21 to seal up to 6 single fiber pigtails with a diameter range of 0 – 4.0 mm.



Cable gland

P/N: FIST-GB-GLDXX-01

Cable gland size ranges:

PG 16 – 6 to 14 mm

PG 21 – 9 to 18 mm

PG 29 – 15 to 26 mm

XX= cable gland size



Cable gland

FIST-GB-GLD21/16-01

Cable gland PG21/16 for cable range 6-14 mm



Strain relief bracket

P/N: FIST-GB-STRBR-01

Strain relief bracket for the central strength member of 2 loose tube cables.

A total of four strain relief brackets (each for 2 cables) can be installed in each box.



Connector adapters

For maximum flexibility, Connector Adapters can be installed in the patch panel.

Always select simplex connector adapters with retainers, without clip/shutter, without strap, with ceramic sleeve:

P/N: OC-ADK-XX-XX-NNCS



1 retainer and 2 KTU's

P/N: FSA-ADK-H1-4

When pigtails are routed out of the box without a patching requirement a Kevlar strain relief device (KTU) is fitted in the patch panel which can provide strain relief.

Each KTU can accommodate:

- 2 individual pigtails (single fiber)- max. diameter 3.1 mm or
- 1 Ribbon4 pigtail or
- 1 Ribbon8 pigtail or
- 1 Ribbon12 pigtail

Maximum 9 retainers (thus 18 KTU's) can be placed in 1 connector patch panel.



12 - Unit Patch Panel Kit 01

P/N: FIST-GB2-TKIT01

Includes a pigtail routing block, one 12-unit patch panel and bend controls. The UMS capacity will decrease with 12 units because of the pigtail routing block.



12 - Unit Patch Panel Kit 02

P/N: FIST-GB2-TKIT02

Additional pigtail duct, one 12 - unit patch panel and bend controls when the FIST-GB2-TKIT01 has already been installed.



BUILDING ENTRY - WALL MOUNT ENCLOSURES

Raychem



MONDRAGON MDG-FO-FOPT

Uses

This element is used as the termination of fiber optic cable and provides access, and once the adapters are installed, to four equipment unit.

You may also use it as an in-building fusion splice box.

Description

The MDG-FO-FOPT is rectangular and consists of three parts: a base, a lid and a tray.

The tray can store spliced fibers and has a rectangular shape. The same is prepared on a four-way organizer that allows four connections for the respective cables.

On the sides there two organizers of eight double positions and two clips to be placed in storage, depending on the needs of the facility, then fixed by the organizers.

Height (mm)	Width (mm)	Depth (mm)	Adapters Capacity	Cable Entry	Fibers Capacity	Trays Capacity
210	170	29	8	6	16	1

CPWO Customer Premises Wall Outlet



The CPWO is a very compact wall outlet for a maximum of 2 FO connectors and 1 RJ-45 or RJ-11 Cu connector. The box provides mechanical protection for the fiber and permits appropriate access while maintaining the highest standards of fiber management. The box is typically used at the customer premises in the termination part of the access network.

Features.

- Can be used flush mount or surface mount. Compatible with almost any standard electrical box
- Compatible with 250 micron and 900 micron fiber types
- Innovative, removable fiber organizer system facilitates an easy installation in the field
- Guaranteed minimum bending radius of 20mm
- One SC or duplex LC connector footprint
- Splice-through function allows moving the FO access point to any other point in the premise
- Environmental friendly materials, low smoke zero halogen
- Cable entry points : back, bottom, side
- Ideal for G-PON system
- Installable in traditional telephone ports and retains Copper ports.
- Dimensions (in mm)
 - P/N: CPWO-S (Standard Profile - Hybrid Cu/Fiber termination) 81W x 116H x 38D
 - P/N: CPWO-L (Low Profile - Fiber termination only) 81W x 116H x 28D
 - Max. cable diameter through face plate 6mm
 - Max. cable diameter through extension plate 9mm

CPWO Optional Accessories

- P/N: CPWO-WE Wall extension kit
- P/N: CPWO-LABEL-KIT-1000 Logo roll (1000pcs)
- P/N: CPWO-TUBE-10M Tubing for termination of cables without 900 μ coating (10 m long)

IFDB-M Indoor Fiber Distribution Box

The IFDB-M is an enclosure to break out fibers from an indoor riser cable into individual drops to the living units of an MDU. These drops provide a fiber optic connection to the living units.

The IFDB-M allows to break out fiber from certain riser cables by making a window cut not larger than 70 mm without interrupting the strength member.

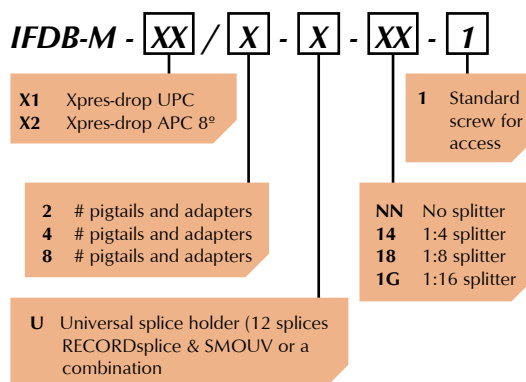
To connect the drop to the raiser fibers splices or Xpres-drop connectors can be used.

Features

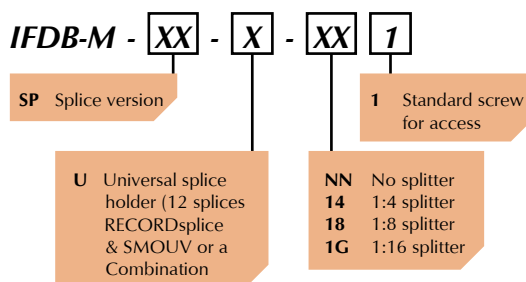
- Compact enclosure (126 x 200 x 50 mm)
- Free breathing enclosure for indoor use
- In-line and butt configuration possible for main cable
- Wrap around cable seals for main cable and drops
- Not required to cut loop-through fibers from riser cable
- Window cuts as small as 70 mm possible with certain cable constructions
- Compatible with RECORD splice, SMOUV and ANT splice protectors
- Low smoke zero halogen enclosure material
- Transient free customer provisioning
- Drop cables are individually terminated
- Separate storage of un-connected fibers from spliced drop fibers
- Possibility to integrate PON splitters
- Main cable up to 11 mm diameter
- Drop cable up to 6 mm diameter
- Easy drop cable termination on strain relief device.



Patch and Splice Version



Splice Version



IFDB-M Accessories included

- Box with fiber organizer
- Main cable seal and termination device
- Drop cable seal for 8 drops with drop cable termination devices
- Universal splice holder for 12 splices
- Installation instruction

IFDB-M Optional accessories

Standard Accessories

P/N: IFDB-M-DROP-KIT-01	10 drop port extension kits including drop cable seals and drop cable termination devices
P/N: IFDB-M-TRU-01	10 "through the wall" drop cable covers
P/N: IFDB-KTU	Drop cable KTU (MOQ: 100 pcs)
P/N: CPWO-LABEL-KIT-1000	1000 labels to cover access screw

BUILDING ENTRY - WALL MOUNT ENCLOSURES

Fixation bracket

P/N: IFDB-M-FIX-01	In line/butt cable bracket
P/N: IFDB-M-FIX-02	Box wall fixation bracket
P/N: IFDB-M-FIX-03	Fixation bracket over cable bundle (50 mm high)

Drop cables

P/N: OC-CB-DROP-ODB-1F-A	4,9 mm diameter; LSZH jacket material with low bend radius G657A fiber and Kevlar as strength element (indoor and outdoor use) Unit of measure = 1 m
	MOQ = 1000 m



Optical Fiber Distribution boxes



4 port Optical Fiber Distribution for SC and LC adapters (Empty Box)

P/N: MOFDH4121
Height: 38mm
Width: 95mm
Depth: 120mm



8 port Optical Fiber Distribution for SC and LC adapters (Empty Box)

P/N: MOFDH8121
Height: 40mm
Width: 145mm
Depth: 174mm



- Accessories included
 - Splice holder
 - Dual mounting system (Wall / Rack)
 - Quick Open/Close system
 - Bracket to hold external plant cable
 - Clamps to hold reserve fiber
 - Support for central strength member
- Optional:
 - SC/SC or LC/LC* duplex fully loaded adapters. (*) With LC duplex adapters you can duplicate the number of ports.
 - See Other Passive Elements Chapter / Fiber Optic Bulkhead Adapters - page 86.



4 Port Wall Mount Box for ST Adapters (Empty Box)



P/N: F1WM4P
Height: 36mm
Width: 130mm
Depth: 166mm

- Optional:
 - ST/ST fully loaded adapters.
 - See Other Passive Elements Chapter / Fiber Optic Bulkhead Adapters - page 86.

Unloaded Enclosures and Accessories



Single Sided, Single Door Wall Mount Patch Enclosure

Features:

- Accepts two snap-in adapter plates or MPO Cassettes (see Central Office Chapter /Cable System For Data Center / MPO, not included)
- Top and bottom cable entries feature integral rubber cable grommets
- Reversible cable strain relief bracket
- Internal cable management
- Fiber loop storage and management
- Recessed, easy-to-use door latch
- Optional lock package for added security
- Designed for use in protected areas
 - Allows access to adapter ports even when door closed
- Nominal dimensions: 8" (20cm) H x 4" (10cm) D x 8" (20cm) W



Description	Part Number
Double Adapter Plate Wall Mount Patch Enclosure	1278323-2
Optional Lock	559501-2
Replacement Cable Grommets	559496-2

Fiber Densities

Insert Type	Fiber Density Max.	Duplex Port Density Max.
6-Fiber Adapter Plates	12	6
12-Fiber Adapter Plates or MPO Cassettes	24	12
24-Fiber Adapter Plates or MPO Cassettes	48	24

Double Sided, Double Door Wall Mount Patch Enclosure

Features:

- Accepts two or four snap-in adapter plates or MPO Cassettes (see Central Office Chapter /Cable System For Data Center / MPO, not included)
- Top and bottom cable entries feature integral rubber cable grommets
- Reversible cable strain relief bracket
- Internal cable management
- Fiber loop storage and management
- Recessed, easy-to-use door latches
- Optional lock package for added security
- Designed for indoor use
- Doors prevent access to adapter ports when closed
- Nominal dimensions: 13.5" (38cm) H x 4" (10cm) D x 15" (34cm) W



Description		Adapter Plate Capacity	Figure	Part Number
Double Sided, Double Door Wall Mount Enclosures	-	2	A	559560-2
	-	4	B	559561-2
	with Lock & Flat Tie Holders	4	-	559561-3
Optional Lock				559501-2
Replacement Cable Grommets				559496-2

BUILDING ENTRY - WALL MOUNT ENCLOSURES

Fiber Densities

Insert Type	Two Adapter Plate		Four Adapter Plate	
	Fiber Density Max.	Duplex Port Density Max.	Fiber Density Max.	Duplex Port Density Max.
6-Fiber Adapter Plates	12	6	24	12
12-Fiber Adapter Plates or MPO Cassettes	24	12	48	24
24-Fiber Adapter Plates or MPO Cassettes	48	24	96	48

**Double Sided, Single Door Wall Mount Patch Enclosure****Features:**

- Accepts up to four snap-in adapter plates or two MPO Cassettes (see Central Office Chapter /Cable System For Data Center / MPO, not included)
 - MPO Cassettes in top two slots only
- Top and bottom cable entries feature integral rubber cable grommets
- Integral hasp for use with off-the-shelf padlocks
- Recessed, easy-to-use door latch
- Designed for indoor use
- Door prevents access to adapter ports when closed
- Nominal dimensions: 12" (30.5cm) H x 3" (7.6cm) D x 12" (30.5cm) W

Description	Part Number
Double Sided, Single Door Wall Mount Patch Enclosure	1435128-1

Fiber Densities

Insert Type	Fiber Density Max.	Duplex Port Density Max.
6-Fiber Adapter Plates	24	12
12-Fiber Adapter Plates or MPO Cassettes	48	24
24-Fiber Adapter Plates or MPO Cassettes	96	48

**Wall/Furniture Mounting Bracket****Features:**

- Accepts up to two snap-in adapter plates or two MPO Cassettes (see Central Office Chapter/Cable System for Data Center/MPO, not included).
- Mounting holes for fastening to TIA rack, wall, or furniture
- Bracket Color: Black
- Compatible with magnetic means
- Picture shown with Optional Cable Ring. P/N: 1206146-1

Description	Part Number
Wall/Furniture Mounting Bracket	1777126-1

Fiber Densities

Insert Type	Fiber Density Max.	Duplex Port Density Max.
6-Fiber Adapter Plates	12	6
12-Fiber Adapter Plates or MPO Cassettes	24	12
24-Fiber Adapter Plates or MPO Cassettes	48	24

BUILDING ENTRY - WALL MOUNT ENCLOSURES

Double Sided, Double Door Wall Mount Splice and Patch Enclosures

Features

- Accepts up to six snap-in adapter plates or MPO Cassettes (see central office chapter/cable system for MPO), not included.
- Top and bottom cable entries feature integral rubber cable grommets as listed
- Reversible cable strain relief bracket
 - Can hold one splice holder P/N: 1374526
 - Splice holder can hold up to four splice trays
- Recessed, easy-to-use door latches
- Optional lock package for added security
- Designed for indoor use
- Doors prevent access to adapter ports when closed
- Knockout ports for cable glands or grommets
- Nominal dimensions: 16.5" (40cm) H x 14" (35.5cm) D x 5" (13cm) W



Description		Part Number
Double Sided, Double Door Wall Mount Patch and Splice Enclosures	-	1278755-1
	with Cable Grommets and Cable Glands	1278755-3
	with Grommets, Cable Glands and one Splice Tray Holder (1374526)	1278755-4
Optional Lock		559501-2
Replacement Cable Grommets		559496-2

Fiber Densities/Fiber Splice Capacity

Insert Type	Fiber Density Max.	Duplex Port Density Max.
6-Fiber Adapter Plates	36	18
12-Fiber Adapter Plates or MPO Cassettes	72	36
24-Fiber Adapter Plates or MPO Cassettes	144	72
Spliced Fiber Capacity	48	-

Splice Accessories for Wall Mount Splice and Patch Enclosure

Features:

- Splice tray holder can hold up to four splice trays
 - Can mix and match splice trays
- Splice trays hold up to 12 fusion, elastomeric or mechanical splices (select appropriate part number)
- Black anodized aluminum construction for durability and improved fiber visibility
- Each splice tray includes clear plastic cover, end caps for fiber retention, and appropriate splice holders

Description	Included Splice Holder	Figure	Part Number
Splice Tray Holder	-	A	1374526-1
Splice Tray	Fusion	B	559433-2
	Elastomeric & Fusion with Sleeve	C	559433-3
	CORELINK	D	559433-4



BUILDING ENTRY - WALL MOUNT ENCLOSURES

Loaded Enclosures and Accessories**Double Sided, Single Door Wall Mount patch Enclosure****Features:**

- Preloaded with Multimode ST or SC Duplex Adapters
- Integral hasp for use with off-the-shelf padlocks
- Recessed, easy-to-use door latches
- Designed for indoor use
- Door prevents access to adapter ports when closed
- Recessed, easy-to-use door latch
- Nominal dimensions: 12" (30 cm) H x 3" (77cm) D x 12" (30 cm) W

Description		Coupler Color	Fiber Density	Duplex Port Density	Part Number
ST	Multimode	Beige	12	6	1435129-1
			24	12	1435129-2
SC Duplex	Multimode	Beige	12	6	1435130-1
			24	12	1435130-2

**Double Sided, Single Door Wall Mount Splice and Patch Enclosure****Features:**

- Pre-loaded with SC Duplex Adapters as listed
- Top and bottom, left and right cable entries feature plastic grommets
- Includes cable management rings
- Includes one splice holder and one splice tray
 - Splice tray can hold up to twelve splices
- Integral hasp for use with off-the-shelf padlocks
- Designed for indoor use
- Door prevents access to adapter ports when closed
- Recessed, easy-to-use door latch
- Nominal dimensions: 12" (30.5cm) H x 3" (7.6cm) D x 12" (30.5cm) W

Description		Coupler Color	Fiber Density	Duplex Port Density	Part Number
SC Duplex	Multimode	Beige	12	6	1435467-3
	Single-mode	Blue	12	6	1435467-4
			6	3	1435467-1
			2	1	1435467-2

1U Rack Mount Enclosure - 12 SC

P/N: FOFD112SC21

Height: 45mm

Width: 484mm

Depth: 310mm

Accessories included

- 12 X SC / SC fully loaded adapters
- Quick Open/Close system
- Bracket to hold external plant cable
- Clamps to hold reserve fiber
- Support for central strength member
- Splice tray



1U Rack Mount Enclosure - 24 SC

P/N: ODFS24PRAX

Height: 50mm

Width: 484mm

Depth: 300mm

Accessories included

- 24 SC/SC fully loaded adapters
- 24 x 0.5 meter simplex pigtails
- 2 x splice trays
- Support for central strength member
- Fusion splice chip
- Fusion protection sleeves



FIS 19" Rack Mount Enclosure

12 port rack enclosure (Unloaded) holds 2 (6 packs)

P/N: F1-RM12

- Height: 1.87"
- Width: 17"
- Depth: 9.75"

24 port rack enclosure (Unloaded) holds 4 (6 packs)

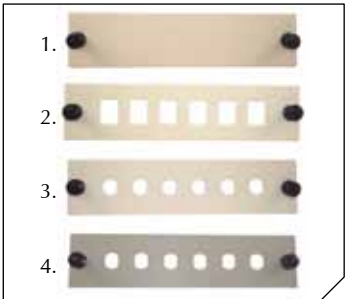
P/N: F1-RM24

- Height: 3.6"
- Width: 17"
- Depth: 9.75"

Note: Pictures shown 24 port rack



Accesoriores for FIS 19" Rack Mount Enclosure



Snap-In adapter plates for FIS 19" Rack Mount Enclosure

1. Blank 6 Pack (Unloaded) P/N: F1-BLANK
2. SC 6 Pack (Unloaded) P/N: F1-SC6
3. FC 6 Pack (Unloaded) P/N: F1-FC6
4. ST 6 Pack (Unloaded) P/N: F1-ST6

Optional:

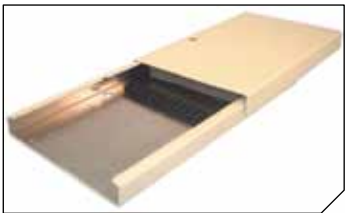
- Fully loaded adapters. (See Other Passive Elements Chapter / Fiber Optic Bulkhead Adapters - Page 86)

Fusion splice holders for FIS 19" Rack Mount Enclosure



24 position Fusion Splice

P/N: FSFD112



12 position Fusion Splice

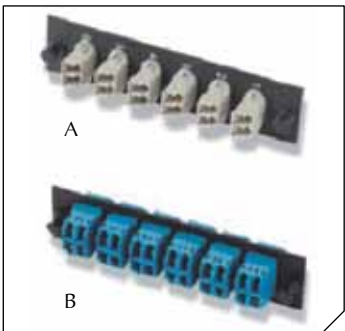
P/N: F1-6707F



Snap-In Adapter Plates

Features:

- All Snap-in Adapter Plates fit AMP NETCONNECT unloaded Optical Fiber Enclosures included in this chapter
- MT-RJ Jack Adapter Plates:
 - Hold up to six (6) MT-RJ (standard or secure) Jacks or Pigtail Jack Cable Assemblies
 - Accepts labeling icons (see this chapter / Work Area - page 67)
- MT-RJ Plug Adapter Plates hold up to twelve (12) MT-RJ Plugs (standard only)
- LC SECURE plugs will only mate with the same color LC SECURE adapters
- Package quantity = 1 per pack

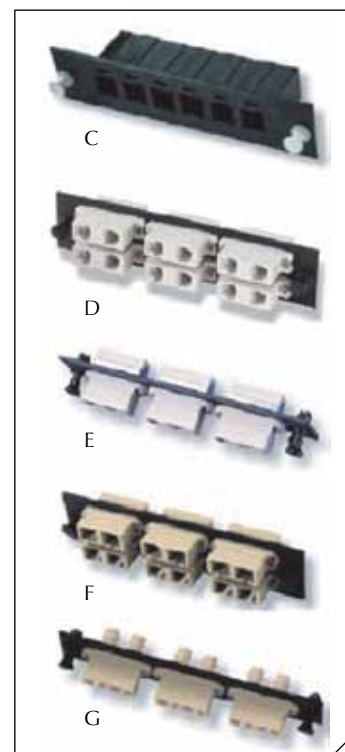


Adapter Description Fibers	Fibers	Type	Adapter Color	Figure	Part Number
LC Duplex	12	Multimode (62.5/125,OM1)	Beige	A	1374463-3
		Multimode (50/125,OM2)	Black	--	1374463-4
		Multimode (XG LO 50/125,OM3)	Aqua	--	1374463-5
		Single-mode (UPC)	Blue	--	1374463-1
		Single-mode (APC)	Green	--	1374463-6

Note: UPC - Ultra Physical Contact, APC - Angled Polish Connector

Snap-In Adapter Plates continuation

Adapter Description Fibers	Fibers	Type	Adapter Color	Figure	Part Number
LC Duplex	24	Multimode (62.5/125,OM1)	Beige	-	1435516-2
		Multimode (50/125,OM2)	Black	-	1435516-4
		Multimode (XG LO 50/125,OM3)	Aqua	-	1435516-5
		Single-mode (UPC)	Blue	B	1435516-1
		Single-mode (APC)	Green	-	1435516-6
LC SECURE Duplex	24	Multimode/Single-mode	Red	-	1499702-2
		Multimode/Single-mode	Yellow	-	1499703-2
		Multimode/Single-mode	Green	-	1499704-2
		Multimode/Single-mode (UPC Polish)	Blue	-	1499705-2
		Multimode/Single-mode	Rose	-	1499706-2
		Multimode/Single-mode	Aqua	-	1499707-2
		Multimode/Single-mode	Brown	-	1499708-2
		Multimode/Single-mode	Violet	-	1499709-2
		Multimode/Single-mode	Orange	-	1499710-2
		Multimode/Single-mode	Slate	-	1499711-2
MT-RJ, Holds 6 Jacks	12	-	-	C	1278328-3
MT-RJ, 12 Plugs	24	Multimode (62.5/125,OM1)	Beige	D	1435440-1
		Multimode (50/125,OM2)	Black	-	1435440-2
		Single-mode (UPC)	Blue	-	1435440-3
SC Simplex	6	Multimode (62.5/125,OM1)	Beige	-	559517-7
		Multimode (50/125,OM2)	Black	-	559517-3
		Multimode (XG LO 50/125,OM3)	Aqua	-	559517-8
		Single-mode (UPC)	Blue	-	559517-1
		Single-mode (APC)	Green	-	559517-2
SC Duplex	6	Multimode (62.5/125,OM1)	Beige	E	559558-1
		Multimode (50/125,OM2)	Black	-	559558-5
		Multimode (XG LO 50/125,OM3)	Aqua	-	559558-6
		Single-mode (UPC)	Blue	-	559558-2
		Single-mode (APC)	Green	-	559558-7
SC Duplex	12	Multimode (62.5/125,OM1)	Beige	F	559596-1
		Multimode (50/125,OM2)	Black	-	559596-5
		Multimode (XG LO 50/125,OM3)	Aqua	-	559596-6
		Single-mode (UPC)	Blue	-	559596-2
		Single-mode (APC)	Green	-	559596-3
SC to ST Duplex	6	Multimode (62.5/125,OM1)	Beige	G	559601-1
		Multimode (50/125,OM2)	Black	-	559601-4
		Multimode (XG LO 50/125,OM3)	Aqua	-	559601-5
		Single-mode (UPC)	Blue	-	559601-6



Note: UPC - Ultra Physical Contact, APC - Angled Polish Connector

Snap-In Adapter Plates continuation



Adapter Description	Fibers	Type	Adapter Color	Figure	Part Number
SC to ST Duplex	12	Multimode (62.5/125,OM1)	Beige	H	1278368-1
		Multimode (50/125,OM2)	Black	--	1278368-2
		Multimode (XG LO 50/125,OM3)	Aqua	--	1278368-3
		Single-mode (UPC)	Blue	--	1278368-5
ST Simplex	6	--	Metallic	I	559557-1
ST Duplex	12	Single-mode (UPC)	Metallic	I	559515-2
		Multimode (62.5/125,OM1)	Beige	J	1278567-1
		Single-mode (UPC)	Blue	--	1278567-2
MPO 6 Port	--	--	Black	--	1374598-1
Blank	--	--	--	K	559523-1
SL 6 Port (*)	--	--	--	L	1479508-1

(*) SL Series Discrete Adapter/Plates accept SL Series Jacks (see Other Passive Elements chapter - page 86).
Note: UPC - Ultra Physical Contact, APC - Angled Polish Connector

1U Rack Mount Fiber Optic Patch Panel

Features:

- Accepts three (3) Snap-in Adapter Plates or MPO Cassettes (see this Chapter and Central Office Chapter / MPO System), not included
- Fits standard TIA 19" rack

Description	Part Number
1U Rack Mount Fiber Optic Patch Panel	1777125-1

Fiber Densities

Insert Type	Fiber Density Max.	Duplex Port Density Max.
6-Fiber Adapter Plates	18	9
12-Fiber Adapter Plates or MPO Cassettes	36	18
24-Fiber Adapter Plates or MPO Cassettes	72	36

2U Rack Mount Fiber Optic Patch Panel

Features:

- Rack Mount Panel holds 72 SL Series Fiber Inserts (See Other Passive Elements chapter - Page 86)
- SL Series Inserts not included with Panel
- Fits standard TIA 19" rack
- Integrated front (3") and rear (8") cable management trays
- 2U (3.5")



Panel Holds 3 Snap-in Adapter Plates or MPO cassettes (not included)



Description	Part Number
2U Rack Mount Fiber Optic Patch Panel	1435847-1

SL Series Insert (not included with panel)	Fiber Density Max.	Duplex Port Density Max.
MT-RJ Jack Housing, 2 Fiber	144	72
LC Coupler, 2 Fiber	144	72
ST Coupler, 1 Fiber	72	36

1U Rack Mount Patch Enclosures

Features:

- Accept three (3) Snap-in Adapter Plates or MPO Cassettes (see this chapter and Central Office chapter / MPO System), not included
- Enclosure 1348876-4 holds two FOSC 500 AA splice trays
 - P/N: 3-1201266-4 (not included)
 - Each tray holds 24 Fibers
- Quick release Slide and tilt drawer
- Forward, flush or recessed mounting
- Fit standard TIA 19" rack
- Include fiber management rings
- Standard Cable Enclosure includes cable strain relief
- Armored and Multiple Trunk Cables Enclosure includes:
 - Special design to hold armored or multiple trunk cables in place
 - Large rear cable entry with tie down brackets that can be mounted inside or outside of Enclosure



Description	Height	Width	Part Number
Standard Cables	1U (1.75")	19"	1348876-4
Armored and Multiple Trunk Cables	1U (1.75")	19"	1435555-1

Fiber Densities

Insert Type	Fiber Density Max.	Duplex Port Density Max.
6-Fiber Adapter Plates	18	9
12-Fiber Adapter Plates or MPO Cassettes	36	18
24-Fiber Adapter Plates or MPO Cassettes	72	36

1U Rack Mount Patch Enclosure

Features:

- Accept three (3) Snap-in Adapter Plates or MPO Cassettes (see this chapter and Central Office chapter / MPO System), not included
- Heavy duty, smoothly operating, slide mounting brackets
- Clear top removable cover
- Flush mount
- Fits standard TIA 19" rack



Description	Height	Width	Part Number
Panel Enclosure	1U (1.75")	19"	1-1657014-7



Panel Holds 3 Snap-in Adapter Plates or MPO cassettes (not included)

Fiber Densities

Insert Type	Fiber Density Max.	Duplex Port Density Max.
6-Fiber Adapter Plates	18	9
12-Fiber Adapter Plates or MPO Cassettes	36	18
24-Fiber Adapter Plates or MPO Cassettes	72	36

1U MT-RJ Rack Mount Patch Enclosure



Features:

- 1U 48-Fiber Rack Mount Enclosure high-density solution
- Loaded with housings for MT-RJ Patch Panel Jacks
- Holds up to twenty-four (standard or secure) MT-RJ Patch Panel Jacks or MT-RJ Pigtail Jack Cable Assemblies (each purchased separately, see Patch Cords Chapter)
- Quick release Slide and tilt drawer
- Cable strain relief and management rings included
- Forward, flush or recessed mounting
- Fits standard TIA 19" rack
- Accepts icons for identification (see this chapter / Work Area - page 67)

Fiber Densities

Insert Type	Fiber Density Max.	Duplex Port Density Max.	Part Number
Fiber Densities 2-Fiber MT-RJ Jacks	48	24	1206704-4

1U LC, SC, and ST Rack Mount Patch Enclosures



Features:

- Enclosures pre-loaded with LC, SC, or ST Adapters
- Quick release Slide and tilt drawer
- Cable strain relief and management rings included
- Forward, flush or recessed mounting
- Fits standard TIA 19" rack
- Enclosure 1348876-4 holds two FOSC 500 AA splice trays
 - P/N: 3-1201266-4 (not included)
 - Each tray holds 24 Fibers

Description			Coupler Color	Fiber Density	Duplex Port Density	Part Number
ST	Simplex	Multimode	Metallic	12	6	2-1206114-4
				24	12	4-1206114-4
SC	Duplex	Multimode	Beige	12	6	2-1206138-4
				24	12	4-1206138-4
		Single-mode	Blue	12	6	2-1348960-4
				24	12	4-1348960-4
LC	Duplex	Multimode	Beige	24	12	2-1671000-8
				48	24	4-1671000-8
		Single-mode	Blue	24	12	2-1671000-4
				48	24	4-1671000-4

2U Rack Mount Patch Enclosures

Features:

- Accept up to four (4) Snap-in Adapter Plates or MPO Cassettes (see this Chapter and Central Office Chapter / MPO System), not included.
- Removable front and rear covers for easy access and installation
- Front and rear fiber/cable management rings
- Edge guard on front cable entries for cable assembly protection
- Forward, flush or recessed mounting
- Fits standard TIA 19" and 23" racks
- Standard Cable Enclosure includes cable strain relief
- Armored and Multiple Trunk Cable Enclosure includes:
 - Special design to hold armored or multiple trunk cables in place
 - Large rear cable entry with tie down brackets that can be mounted inside or outside of Enclosure
- Shown loaded with 6-Fiber Duplex SC Snap-in Adapter Plates (not included)



Description	Height	Width	Part Number
Standard Cables	2U (3.50")	19" or 23"	559542-2
Armored and Multiple Trunk Cables	2U (3.50")	19" or 23"	1435556-1

Fiber Densities

Insert Type	Fiber Density Max.	Duplex Port Density Max.
6-Fiber Adapter Plates	24	12
12-Fiber Adapter Plates or MPO Cassettes	48	24
24-Fiber Adapter Plates or MPO Cassettes	96	48

3U Rack Mount Patch Enclosures and Accessories

Features:

- Accept up to eight (8) Snap-in Adapter Plates or MPO Cassettes (see this Chapter and Central Office Chapter / MPO System), not included
- Removable front and rear covers for easy access and installation
- Front and rear cable management rings
- Edge guard on front cable entries for cable assembly protection
- Forward, flush or recessed mounting
- Fits standard TIA 19" and 23" racks
- Standard Cable Enclosure includes cable strain relief
- Armored and Multiple Trunk Cable Enclosure includes:
 - Special design to hold armored or multiple trunk cables in place
 - Large rear cable entry with tie down brackets that can be mounted inside or outside of Enclosure
- Security Kit includes two (2) locks and one (1) aluminum front door (black)
 - For use with 3U enclosure 559614-2 only
- Shown loaded with 12-Fiber MT-RJ Snap-in Adapter Plates (not included)



Standard Front



Back

Description	Height	Width	Part Number
Standard Cables	3U (5.25")	19" or 23"	559614-2
Armored and Multiple Trunk Cables	3U (5.25")	19" or 23"	1435557-1
3U Security Kit	–	–	1435187-2

Fiber Densities

Insert Type	Fiber Density Max.	Duplex Port Density Max.
6-Fiber Adapter Plates	48	24
12-Fiber Adapter Plates or MPO Cassettes	96	48
24-Fiber Adapter Plates or MPO Cassettes	192	96

TELECOMMUNICATIONS ROOM



4U Rack Mount Patch Enclosures and Accessories



Features:

- Accept twelve (12) Snap-in Adapter Plates or MPO Cassettes (see this Chapter and Central Office Chapter/MPO System), not included.
- Removable front and rear covers for easy access and installation
- Front and rear cable management rings
- Edge guard on front cable entries for cable assembly protection
- Forward, flush or recessed mounting
- Fits standard TIA 19" and 23" racks
- Standard Cable Enclosure includes cable strain relief
- Armored and Multiple Trunk Cable Enclosure includes:
 - Special design to hold armored or multiple trunk cables in place
 - Large rear cable entry with tie down brackets that can be mounted inside or outside of Enclosure
- Security Kit includes two (2) locks and one (1) aluminum front door (black)
 - For use with 4U enclosure 559552-2 only
- Shown loaded with 6-Fiber ST Snap-in Adapter Plates (not included)

Description	Height	Width	Part Number
Standard Cables	4U (7.*0")	19" or 23"	559552-2
Armored and Multiple Trunk Cables	4U (7.*0")	19" or 23"	1435558-1
4U Security Kit	-	-	*1435161-2

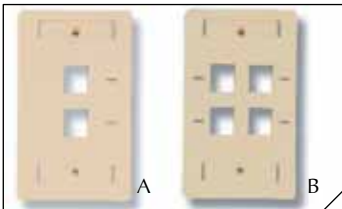
Fiber Densities

Insert Type	Fiber Density Max.	Duplex Port Density Max.
6-Fiber Adapter Plates	72	36
12-Fiber Adapter Plates or MPO Cassettes	148	72
24-Fiber Adapter Plates or MPO Cassettes	288	144

WORK AREA



Standard Faceplates



Features:

- Accepts all MT-RJ Outlet Jacks and SL Series Multimedia Inserts (See Other Passive Elements chapter - Pages 84 and 86)
- Icons not included

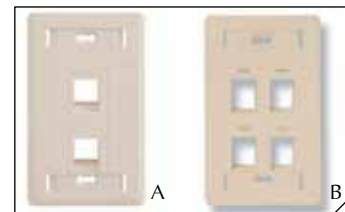
Description	Figure	Part Number
2 - Port	A	557505-X
4 - Port	B	558088-X

X denotes color: -1 =Almond, -2=Black, -3=White, -4=Gray, 1--1=Electrical Ivory

Angled Faceplates

Features:

- Accepts all MT-RJ Outlet Jacks and SL Series Multimedia Inserts (See Other Passive Elements chapter - Pages 84 and 86)
- Angled connector exits
- Protects connections
- Allows closer furniture placement
- Icons not included



Description	Figure	Part Number
2 - Port	A	1375155-X
4 - Port	B	406185-X

X denotes color: -1 =Almond, -2=Black, -3=White, -4=Gray, 1- -1=Electrical Ivory

Icon Wheels

Features:

- For use with:
 - Standard Faceplates
 - Angled Faceplates
 - MT-RJ Rack Mount Enclosures
 - MT-RJ Snap-In Adapter Plate



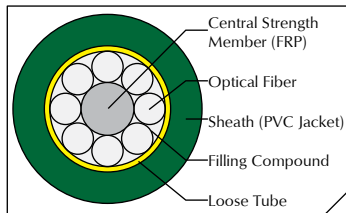
Each Wheel Contains:	Base Part Number
4 Data, 4 Blank, 2 Phone, 3 Cat 5, 1 Fax, 1 Modem, 1 Print	558176-X
16 Data	558198-X
16 Phone	558199-X
16 Blank, available in:-1, -6, -8, 1- -0 and 1- -1 only	558821-X

X denotes color: -1 =Almond, -2=Red, -3=Green, -4=Blue, -5=Yellow, -6=Black, -7=Orange, -8=White, -9=Violet, -1- -0=Gray , 1 -- 1=Electrical Ivory



Multi-core Breakout Cable, 12 SM Fibers PVC Jacket

Specifications and Parameters



Item		Single mode	
Sheath Outer diameter		12.5 mm	
Sheath Outer thickness		1.2-1.4mm	
FRP outer diameter		2.1mm	
Loose tube outer diameter		6.3mm	
Cable weight		150kg/km approx.	
Operating temperature		-20°C ~+70°C	
Storage temperature		-40°C ~+ 70°C	
Tensile strength	Short term	1320N	
	Long term	400N	
General attenuation		1310nm	≤ 0.4dB/KM
		1550nm	≤ 0.25dB/KM
Bending radius	Dynamic	10 times of cable diameter	
	Static	20 times of cable diameter	

The following features apply for Internal/External and External AMP System Cables. (From page 69 to 71)



Multimode fibers

Fiber Category (-X)	Core Size	Overfill Bandwidth (MHz x km)		Max. Link Length for 1 GBit/s (m)		Max. Link Length for 10 GBit/s (m)		Fiber Attenuation (dB/km)	
		850 nm	1300 nm	850 nm (1000 Base - SX)	1300 nm (1000 Base - SX)	850 nm (10G Base - SR) (10G Base - SW)	1300 nm (10G Base - LX4)	850 nm	1300 nm
OM1	62.5 µm	≥ 200	≥ 600	275	550	33*	360*	≤ 2.9	≤ 0.7
OM2 Plus	50 µm	≥ 600	≥ 1200	750	2000	100*	1000*	≤ 2.4	≤ 0.6
OM3 (XG)	50 µm	≥ 1500	≥ 500	1000	600	300	300	≤ 2.7	≤ 0.7
OM3 Plus	50 µm	≥ 3500	≥ 500	1040	600	550	300	≤ 2.7	≤ 0.7

*Mode Conditioning Patchcords required

Singlemode Fibers

Fiber Category (-X)	Core Size	Chromatic Dispersion (ps/nm x km)		Cut-off Wavelength, cabled (nm)	Point Discontinuity (dB)	Fiber Attenuation (dB/km)		
		1310 nm	1550 nm			1310 nm	1380-1386 nm	1550 nm
OS2	9 µm	≤ 3.5	≤ 18.0	≤ 1260	≤ 0.1	≤ 0.34	≤ 0.31	≤ 0.22

The following features apply for Internal/External and External AMP System Cables. (From page 69 to 71)

Geometrical Fiber Properties

Fiber type	Core/Mode-field (μm)	Cladding (μm)	Coating (μm)
OM1	62.5 +/- 3	125 +/- 2	245 +/- 10
OM2 Plus, OM3 (XG), OM3 Plus	50 +/- 3	125 +/- 2	245 +/- 10
OS2	9.2 +/- 0.4	125 +/- 1	245 +/- 5

Optical Cable Specifications

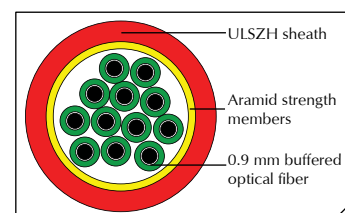
	Maximum Attenuation (dB/km)			
	Loose Tube		Tight Buffered	
	850 nm	1300 nm	850 nm	1300 nm
Multimode				
50/125	3.5	1.5	3.5	1.5
62.5/125	3.5	1.5	3.5	1.5
Singlemode				
9/125	0.45	0.4	0.5	0.45

INDOOR/OUTDOOR CABLES

Internal/External Office Distribution Cable

Product Facts:

- (ULSZH) Universal Low Smoke Zero Halogen
- For Indoor and Outdoor applications
- Suitable for backbone and Fiber-to-the-Desk
- Increased strength and durability
- Tight-Buffer construction
- Suitable for all termination techniques
- Fiber categories: OM1, OM2 Plus, OM3 (XG), OM3 Plus, OS2
- Available fiber count: 4, 6, 8 and 12



Fiber Count	Y - Part Number - X
4	2 - 599144 - 5
4	2 - 599144 - 6
6	2 - 599145 - 5
6	2 - 599145 - 6
6	2 - 599145 - 3
8	2 - 599146 - 6
12	2 - 599148 - 5
12	2 - 599148 - 6
12	2 - 599148 - 3

Y-	Reel size
2-	2 Kilometer

- X	Fiber category
-3	OM3 (XG)
-5	OM1
-6	OM2 Plus

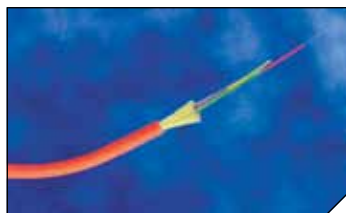
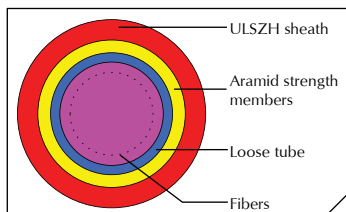
Mechanical Performance

Fiber count	Overall-Diameter (mm)	Weight (Kg/km)	Installation tension max. During installation (N)	Crush resistance (N)	Minimum bend radius during installation (nm)
4	5	27	650	2000	75
6	6	33	1000	2000	90
8	6	35	1000	2000	90
12	7.5	56	1000	2000	115

Temperature Range

Fiber type	Transport / Storage	Installation	Operation
Office Distribution Cable	- 20 to + 70°C	- 5 to 50°C	- 10 to 70°C

Internal/External Loose Tube Cable



Product Facts:

- (ULSZH) Universal Low Smoke Zero Halogen
- For Indoor and Outdoor applications
- Loose tube construction
- Suitable for all termination techniques
- Fiber categories: OM1
- Available fiber count: 12
- Aramid yarns

Fiber Count	Y - Part Number - X
12	2 - 599164 - 5

Y-	Reel size
2-	2 Kilometer

- X	Fiber category
-5	OM1

Mechanical Performance

Fiber count	No. of tubes/fillers	Overall-Diameter (mm)	Weight (Kg/km)	Installation tension max. During installation (N)	Crush resistance (N)	Minimum bend radius during installation (nm)
12	1	6.4	33	500	2000	140

Temperature Range

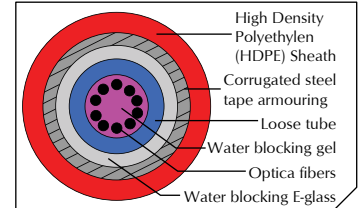
Cable type	Transport / Storage	Installation	Operation
Gel filled, loose tube	- 20 to + 60°C	- 5 to 50°C	- 20 to 60°C

External Rodent Resistant Cable with Corrugated Steel Armour



Product Facts:

- HDPE (High Density Polyethylene)
- Metallic rodent resistance (corrugated steel)
- For use in ducts and in direct burial applications
- Longitudinal and lateral water resistance
- Central gel-filled loose tube construction
- Excellent crush and impact resistance
- Suitable for all termination techniques
- Fiber categories: OM1, OM2 Plus, OM3 (XG), OM3 Plus, OS2
- Available fiber count: 4, 6, 12 and 24



Fiber Count	Y - Part Number - X
4	2 - 599681 - 5
4	2 - 599681 - 6
6	2 - 599382 - 2
6	2 - 599682 - 3
6	2 - 599682 - 4
6	2 - 599682 - 5
6	2 - 599682 - 6
12	2 - 599683 - 3
12	2 - 599683 - 4
12	2 - 599683 - 5
12	2 - 599683 - 6
24	2 - 599690 - 4
24	2 - 599690 - 6

Y-	Reel size
2-	2 Kilometer

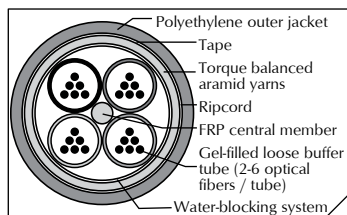
- X	Fiber category
-2	OM3 Plus
-3	OM3 (XG)
-4	OS2
-5	OM1
-6	OM2 Plus

Mechanical Performance

Fiber count	No. of tubes/fillers	Overall-Diameter (mm)	Weight (Kg/km)	Installation tension max. During installation (N)	Crush resistance (N)	Minimum bend radius during installation (nm)
4, 6, 12	1	10	67	1250	3000	200
24	1	10.5	93	1250	3000	200

Temperature Range

Cable type	Transport / Storage	Installation	Operation
Single tube	- 20 to + 70°C	- 5 to 50°C	- 20 to 70°C

**Dry Core Design**

Typical Spans with 1.5% Installation Sag:

- NESC Heavy 175 ft (53 mts)
- NESC Medium 300 ft (91 mts)
- NESC Light 500 ft (152 mts)

(NOTE: Larger spans can be achieved with installation sag greater than 1.5%)

Temperature Range

- Operating - 40°C to + 70°C
- Storage - 50°C to + 70°C
- Installation - 30°C to + 70°C

Mechanical Data

Fiber Count	Nominal Diameter		Nominal Weight		Maximum Lengths*			
					Single-Mode		Multimode	
	Inches	mm	Lbs / 1000'	Kg / Km	Feet	Meters	Feet	Meters
2 - 24	0,323	8,2	35	35	32.800	10.000	26.250	8.000

* Longer lengths may be available upon request

Installation Information

Maximum Sagging Tension		Maximum Loading Operating Tension		Minimum Bending Radius (Dynamic)		Minimum Bending Radius (Static)	
Lbs	N	Lbs	N	Inches	cm	Inches	cm
147	654	374	1668	7	17	3,5	8,5

Optical Information

Parameters	Single-Mode (1310nm / 1550nm)	Multimode *62.5 / 125 µm (850nm / 1300nm)	Multimode 50 / 125 µm (850nm / 1300nm)
Maximum Attenuation (dB/km)	0,40 / 0,30	3,5 / 1,2	3,5 / 1, 2
Bandwidth (MHz-km)	n / a	200 / 600	500 / 500

* All 62.5/125 µm multimode ADSS cable transmission performances meet or exceed FDDI requirements

Ordering Information

Fiber Count	Fibers Per Tube	Number Of Tubes / Fibers	Part Number		
			Single-Mode	Multimode 62.5 / 125	Multimode 50 / 125
6	6	1 w/6	AE00696420AA1	AE00666420AA1	AE00656420AA1
12	6	2 w/6	AE01296420AA1	AE01266420AA1	AE01256420AA1
18	6	3 w/6	AE01896420AA1	AE01866420AA1	AE01856420AA1
24	6	4 w/6	AE02496420AA1	AE02466420AA1	AE02456420AA1

Sag & Tension Information

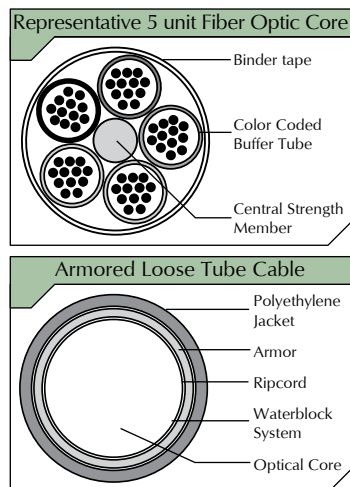
Span		Initial Sag	Initial Tension		NESC LIGHT LOADING			NESC MEDIUM LOADING			NESC HEAVY LOADING		
					Sag	Tension		Sag	Tension		Sag	Tension	
Feet	Meters	%	Lbs	N	%	Lbs	N	%	Lbs	N	%	Lbs	N
50	15	1.5	15	67	0,4	66	294	2,1	101	449	3,2	152	677
75	23	1.5	22	98	0,5	90	339	2,3	135	602	3,6	202	901
100	30	1.5	30	133	0,5	111	494	2,5	166	741	3,9	248	1.102
125	38	1.5	37	165	0,5	131	583	2,7	195	867	4,2	289	1.288
150	46	1.5	44	196	0,5	150	667	2,8	222	989	4,5	329	1.463
175	53	1.5	52	232	0,6	168	748	3,0	248	1.104	4,7	366	1.629
200	61	1.5	59	262	0,6	185	825	3,1	273	1.214	---	---	---
225	69	1.5	66	294	0,6	202	900	3,2	297	1.321	---	---	---
250	76	1.5	74	329	0,6	219	973	3,3	320	1.424	---	---	---
275	84	1.5	81	360	0,6	235	1.044	3,4	342	1.524	---	---	---
300	91	1.5	88	392	0,6	250	1.113	3,5	364	1.621	---	---	---
325	99	1.5	96	427	0,7	265	1.181	---	---	---	---	---	---
350	107	1.5	103	458	0,7	280	1.247	---	---	---	---	---	---
375	114	1.5	111	494	0,7	295	1.312	---	---	---	---	---	---
400	122	1.5	118	525	0,7	309	1.376	---	---	---	---	---	---
425	130	1.5	125	556	0,7	324	1.440	---	---	---	---	---	---
450	137	1.5	133	592	0,7	338	1.502	---	---	---	---	---	---
475	145	1.5	140	623	0,7	351	1.563	---	---	---	---	---	---
500	152	1.5	147	654	0,7	365	1.624	---	---	---	---	---	---

Reel Information

Item	Reel A		Reel B	
	Inches	cm	Inches	cm
Reel Height	42	106,7	58	147,3
Reel Width Outside	36	91,4	38	96,5
Reel Width Inside	32	81,6	32	81,3
Drum Diameter	23	58,7	28	71,1
Arbor Hole Diameter	3	7,9	3	7,9
Reel Weight With Lagging	180 lbs	82 kg	420 lbs	191 kg
Maximum Cable Length	15.256 ft	4.650 m	32.800 ft	10.000 m

Microlink provides ADSS cable on several standard sizes of non-returnable wooden reels.

Armored Loose Tube Cable - Single Jacket/Single Armor for 12 and 24 Fibers



Acting as the backbone for most of today's fiber based systems stranded fiber optic cables play a critical role in the high speed network. AFL's Armored Loose Tube Single Jacket/Single Armor Fiber Optic Cables are designed to provide high fiber counts with the flexibility and versatility required for today's most demanding installations, including direct buried.

Standards

Designed and Manufactured in accordance with the following:

Cable	GR20-CORE, EIA/TIA, REA/RUS PE-90
Fiber	IEC 60793, ITU-T G.65x Series
Color Code	ANSI/EIA 359-A, 598-A, EIC 60304

Optical Details for 12 fiber cable - LE0129C5201S1

Attenuation Characteristics for ITU-T G.652 Single-mode fibers		
Max Individual	0,35 dB/km 1310 nm	
	0,23 dB/km 1550 nm	
60 Fiber Loose Tube Core (5-12 fiber buffer tubes)		
Unit	Fiber Type	Fiber Count
Blue	ITU-T G.652 Single-mode fibers	12
	Filler	N/A
	Filler	N/A
	Filler	N/A
	Filler	N/A
Total Fiber Count		12

Optical Details for 24 fiber cable - LE0249C5201S1

Attenuation Characteristics for ITU-T G.652 Single-mode fibers		
Max Individual	0,35 dB/km 1310 nm	
	0,23 dB/km 1550 nm	
60 Fiber Loose Tube Core (5-12 fiber buffer tubes)		
Unit	Fiber Type	Fiber Count
Blue	ITU-T G.652 Single-mode fibers	12
Orange	ITU-T G.652 Single-mode fibers	12
	Filler	N/A
	Filler	N/A
	Filler	N/A
Total Fiber Count		24

Standard Fiber Color Code

Fiber No.	1	2	3	4	5	6	7	8	9	10	11	12
Color	Blue	Orange	Green	Brown	Slate	White	Red	Black	Yellow	Violet	Rose	Aqua

Designs with more than 12 fibers per tube will use the standard color code and binders for identification of the fiber

Mechanical / Physical Details for 12 and 24 cable

Approximate Cable Diameter	13,3 mm	0,524 in
Approximate Cable Wieght	154 kg/km	0,103 lbs/ft
Outer jacket Type	Medium Density Polyethylene (MDPE)	
Outer Jacket Color	Black	
Maximum Tensile Load		
Short Term	270 kg	600 lbs
Long Term	90 kg	200 lbs
Minimum Bending Radius		
Static	14 cm	6 in
Dynamic	27 cm	11 in
Enviromental Temperature Recommendations		
Storage	-50 to + 70 °C	-58 to +158 °F
Operation	-40 to + 70 °C	-40 to +158 °F
Installation	-30 to + 70 °C	-22 to +158 °F

MANAGEMENT CABLES

Fiber Optic Cables for Patch Cords and Pigtails Assemblies

 AFL Telecommunications

Simplex, Zipcord and DUAL-Link cables are available to provide links to the future for such protocols as FDDI, 10 Gigabit Ethernet, ATM, and Fibre Channel. Connections are easy to terminate with these flexible one or two-fiber designs. Microlink offers the broadest selection of simplex and duplex cordage in Riser specifications. Plenum and LSZH grades available on demand.

Applications

- Communications closet to wall outlet
- Wall outlet to desk
- Connectorized patchcords for interconnect and cross-connect applications
- Easy interface to various connector types



Specifications

Core Size / Fiber Type	Maximum Attenuation (Db/Km)			Overfill Launch Min. Bandwidth (Mhz*Km)		EMBc (Mhz * Km)	Gigabit Ethernet Min. Link Distance (Meters)		10 Gigabit Ethernet Min. Link Distance (Meters)	
	850 NM	1300 NM	1550 NM	850 NM	1300 NM		850 NM	1300 NM	850 NM	1300 NM
62.5 Giga-Link 300	3.5	1.2	N/A	200	600	N/A	300	550	32	---
50 Giga-Link 2000	3.5	1.2	N/A	500	800	N/A	750	2000	110	---
50 Laser-Link 550	3.0	1.2	N/A	4700	550	3500	1040	550	550	---
SM	N/A	0.5	0.5	N/A	N/A	N/A	N/A	5000	N/A	10000

Available Fibers and Mechanical Data

P/N	Description	Type	Fiber Count	Nominal Diameter	Weight (Kg/Km)	Tension (N)		Bending Radius(Cm)	
				(mm)		Installation	Long Term	Installation	Long Term
ZA0029301001	Single Mode (9/125)	Zipcord	2	2.9 X 6.0	15	1063	529	5.0	3.0
SA0019301001	Single Mode (9/125)	Simplex	1	2.9	7	530	267	5.0	3.0
ZR0029201001	Single Mode (9/125)	Zipcord	2	2.0 X 4.0	8	423	213	5.0	3.0
SR0019201001	Single Mode (9/125)	Simplex	1	2.0	4	285	142	5.0	3.0
ZR0029161001	Single Mode (9/125)	Zipcord	2	1.6 X 3.2	6	285	142	5.0	3.0
SR0019161001	Single Mode (9/125)	Simplex	1	1.6	2	213	106	5.0	3.0
TR001H09U601	Single Mode (9/125)	Simplex T.B.	1	900µm	0.83	—	—	—	—
ZA0026301001	Multi Mode (62.5/125)	Zipcord	2	2.9 X 6.0	15	1063	529	5.0	3.0
SA0016301001	Multi Mode (62.5/125)	Simplex	1	29	7	530	267	5.0	3.0
ZR0026201001	Multi Mode (62.5/125)	Zipcord	2	2.0 X 4.0	8	423	213	5.0	3.0
SR0016201001	Multi Mode (62.5/125)	Simplex	1	2.0	4	285	142	5.0	3.0
ZR0026161001	Multi Mode (62.5/125)	Zipcord	2	1.6 X 3.2	6	285	142	5.0	3.0
DR0026281001	Multi Mode (50/125)	Dual - Link	2	2.8	7	529	267	5.0	3.0
ZA0027301001	Multi Mode (50/125)	Zipcord	2	2.9 X 6.0	15	1063	529	5.0	3.0
ZR0027201001	Multi Mode (50/125)	Zipcord	2	2.0 X 4.0	8	423	213	5.0	3.0
ZR0027161001	Multi Mode (50/125)	Zipcord	2	1.6 X 3.2	6	285	142	5.0	3.0
ZA002L301001	Laser Optimized 10 Giga Grad (50/125)	Zipcord	2	2.9 X 6.0	15	1063	529	5.0	3.0
ZR002L201001	Laser Optimized 10 Giga Grad (50/125)	Zipcord	2	2.0 X 4.0	8	423	213	5.0	3.0

Simplex Fiber Optic Cables with Armour for Patch Cords and Pigtailed Assemblies

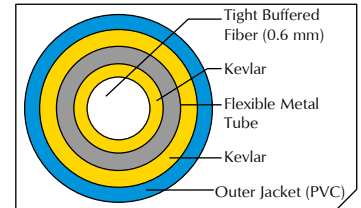
Features:

Flexible metal tube protect the fiber optic.

- High compression resistant, high tensile resistant, rat -bite resistant.
- Bend resistant and optimum flexible.
- Easy wiring, secured and reliable.

Specifications & Parameters

Item		Single mode
Outer diameter		3mm
Standard color		Blue
Cable weight		15kg/km approx.
Operating temperature		-20°C ~+60°C
Storage temperature		-20°C ~+70°C
Tensile strength	Short term	200N
	Long term	100N
Compression resistant strength		≥ 150KGf/100MM
General attenuation		1310nm ≤0.36dB/KM
		1550nm ≤0.22dB/KM
Bending radius	Dynamic	50mm
	Static	30mm



SPECIAL CABLES

Flame Resistant Cable

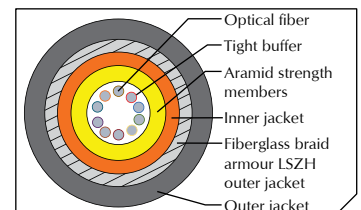
P/N: CDAD

Technical Description

Dielectric armored distribution cable: CDAD very strong, totally dielectric and rodent-protected. Can be used indoor and outdoors.

Advantages

- Very strong and resistant construction
- Direct termination
- Flexible and reliable
- Very easy to strip (gel free)
- Flame retardant (Fe 180), low smoke emission and halogen free (LSZH)
- Totally dielectric
- Rodents protection



Fiber types

The CDAD cable can be manufactured with any optical fibers existing on the market. This chart intends to help you to make your choice:

Fiber SM

Fiber type	Denomination	Application
SM9/125S/UIT G-652	SM	Standard dispersion (optimized 1300nm)
SM9/125S/UIT G-653	SM	Displaced dispersion (long distance applications)
SM9/125S/UIT G-655	SM	For applications DWDM

Fiber MM

Application	Fiber type	Characteristic
Video vigilance	MM 62,5/125 S/IEC 60793	Attenuation: 3,2 dB/K-(850), 1,0 dB/K-(1300)
Industrial control	MM 50/125 S/IEC 60793-2	Attenuation: 3,0 dB/K-(850), 0,9 dB/K-(1300)

Application	Fiber type	Distance (10 Gigabit Ethernet)
Data Transmission	Standard MM 62,5/125 or 50/125	30m/80m
	MM 50/125 Max. Cap. 150 (exceed OM2)	150m
	MM 50/125 Max. Cap. 300 (OM3)	300m
	Standard SM S/UIT G-652	>2000m
	Fiber type	Distance (10 Gigabit Ethernet)
	Standard MM 62,5/125 or 50/125	550m
	HiCap 62,5/125	1000m
	HiCap 50/125	2000m

Standard jackets

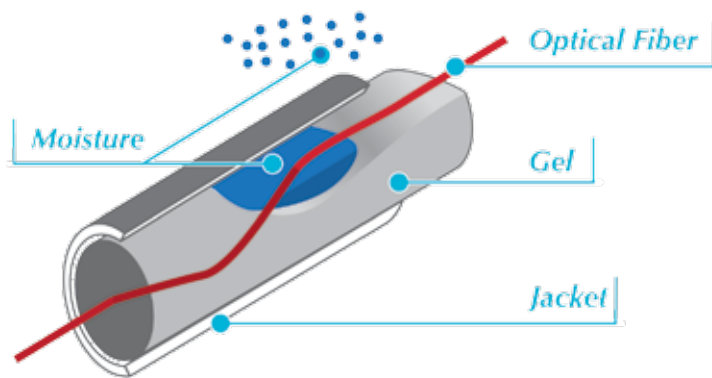
One jacket for each application:

- **Polyethylene (PE):** For outdoors, very resistant to moisture and UV rays.
- **Polyethylene (LSZH):** Zero halogen material for indoors. Flame retardant.
- **Polyurethane:** Very flexible and resistant to chemical agents with rip resistance.
- **Nitrile rubber:** Resistant to oils and hydrocarbons.
- **(Others Jackets on request:** TEFLON. Polyamide. PVC, etc.,)

Advantages

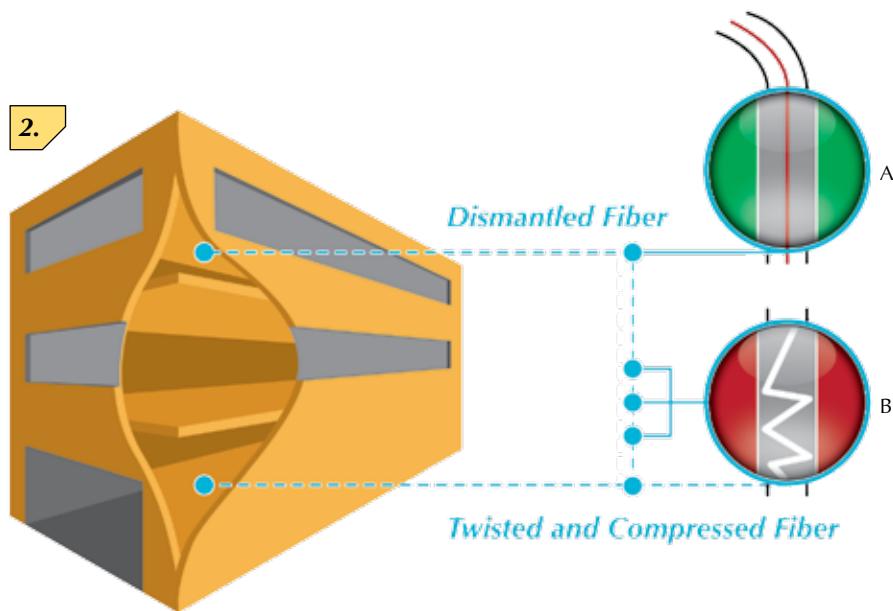
1. **Moisture-proof:** Moisture is the main and ever-present enemy to optical fiber by damages in jacket or by condensation. The double jacket of CDAD and its tight construction convert it into a watertight cable.
“The double jacket of CDAD and its tight construction convert it into a watertight cable”.
2. **Without axial migration:** This phenomenon, usual for Loose Tube cables, does not appear in our Tight Buffered CDAD cable; making it suitable for vertical lays whatever its lengths and its environment.

1.



The double jacket of CDAD and its tight construction convert it into a watertight cable

2.



A. Fiber, non jelly-protected and under tension, bends on a very acute angle. The breaking risk is very high.

B. The fiber excess of all the length accumulates on few meters of the lower part, increasing the attenuation due to compression efforts and numerous and closed bends.

Rodents protection

The double jacket and the fiberglass braid armour provide an effective rodents protection.



SPECIAL CABLES



Strong and flexible

Just as can be observed in the accompanying photos, our CDAD cable, in spite of its excellent flexibility, commodity and simple economic installation, is, above all, extremely strong and resistant.

1. CDAD bent double and Inserted between the Jaws of a dynamometer.
2. Cable being crushed by a pressure of 500kgs.
3. Cable state after being removed from the dynamometer.
4. Despite the tremendous pressure exerted on the cable, the fiber remains unaltered.



Flame resistant (Fe-180)

Fe180 denomination guarantees that a cable maintains operating without interrupting for 3 hours at an ignition temperature of 750°C. (Norms: DIN-VDE 0266, IEC 60331 and UNE 20431-32). Moreover, it is a low smoke emission and halogen free (LSZH) cable.

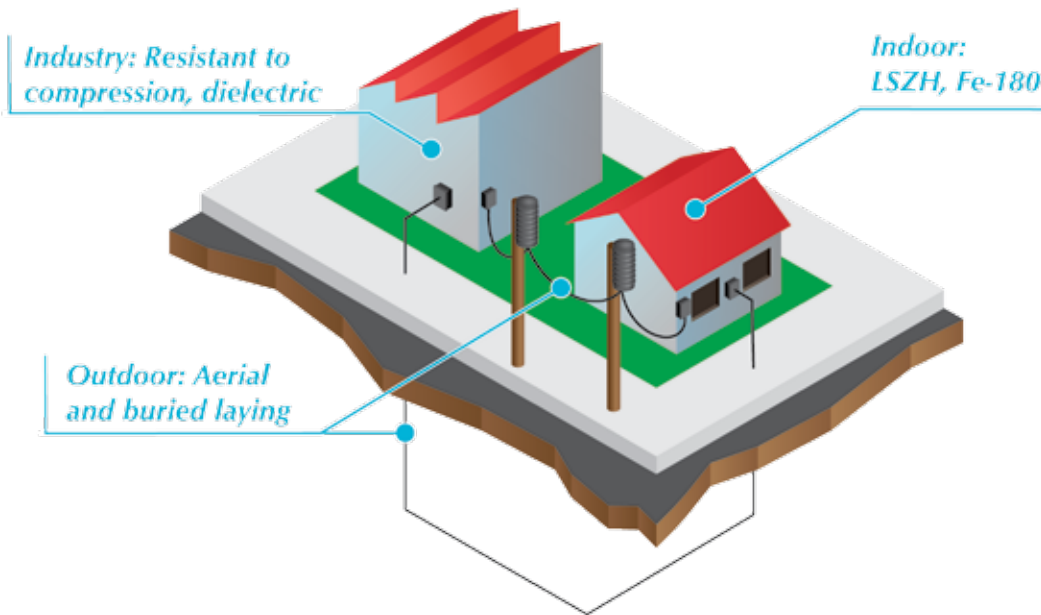


Applications

- Links between buildings
- Horizontal and vertical cabling (Indoor/Outdoor)
- Data networks cabling in Industrial environments
- Ship cabling
- Indoor/outdoor security and CCTV installations (big areas)
- Installations of access Telecom
- Etc ...

Indoor - Outdoor

The CDAD design (dielectric, flexible, flame resistant, easy to connect) and in particular the special characteristics of its jacket and estructure (UV resistant, moisture-proof) make it suitable for all type of installations, without adding different jackets for indoor or outdoor.



Some examples

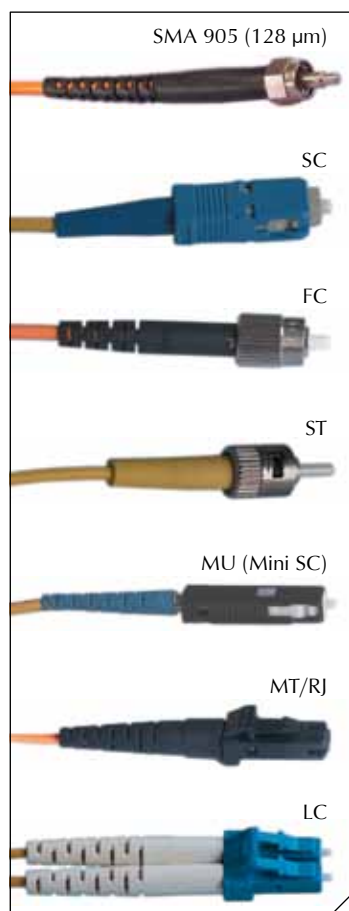
- Wind parks
- Cabling in Tunnels (Vielha, Tunnel M-40 ...)
- CCTV (Dry port of Madrid, prisons ...)
- Industrial installations (Cement plant, Chemical industries ...)
- Control systems (Airports, Seaports, parkings ...)
- Etc...



MALE CONNECTORS



Standard and SFF Connectors (Epoxy / Polish)

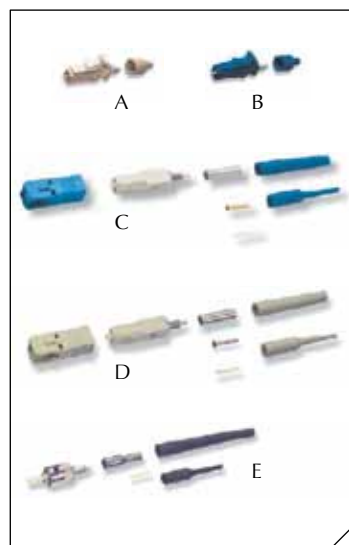


In order to satisfy your needs, MICROLINK LTDA offers the most complete variety of fiber optic cables and connectors, including the latest generation SFF (Single Form Factor).

	Reference	Connector	Type	Termination	Presentation	Boot Size	Boot Color	Boot Type	Ferrule
Standard Connectors	SMAMMPC3	SMA	MM	PC	Simplex	3 mm	Black	Straight	Zirconia
	SCSMPC3	SC	SM/MM	UPC	Simplex	3 mm	Blue	Straight	Zirconia
	SCSMPC900	SC	SM/MM	UPC	Simplex	900 μm	Blue	Straight	Zirconia
	SCSMAPC3	SC	SM	APC	Simplex	3 mm	Green	Straight	Zirconia
	SCSMPCD3	SC	SM/MM	UPC	Duplex	3 mm	Blue	Straight	Zirconia
	FCSMPC3	FC	SM/MM	UPC	Simplex	3 mm	Blue	Straight	Zirconia
	FCSMAPC3	FC	SM	APC	Simplex	3 mm	Green	Straight	Zirconia
	STSMPC3	ST	SM/MM	UPC	Simplex	3 mm	Blue	Straight	Zirconia
	STSMPC900	ST	SM/MM	UPC	Simplex	900 μm	Yellow	Straight	Zirconia
SFF Connectors	MUMMPC3	MU	MM	UPC	Simplex	3 mm	Black	Straight	Zirconia
	MTSMPCD16	MTRJ	SM/MM	UPC	Duplex	1.6 mm	Black	Straight	Thermoplastic
	LCSMPC3	LC	SM/MM	UPC	Simplex	3 mm	Blue	Straight	Zirconia
	LCSMPC3A	LC	SM/MM	UPC	Simplex	3 mm	Blue	Angled 90°	Zirconia
	LCSMPCD3	LC	SM/MM	UPC	Duplex	3 mm	Blue	Straight	Zirconia
	LCSMPCD3A	LC	SM/MM	UPC	Duplex	3 mm	Blue	Angled 90°	Zirconia
	LCSMPC2	LC	SM/MM	UPC	Simplex	2 mm	Blue	Straight	Zirconia
	LCSMAPC2	LC	SM	APC	Simplex	2 mm	Green	Straight	Zirconia
	LCSMPC900	LC	SM/MM	UPC	Simplex	900 μm	Blue	Straight	Zirconia



LightCrimp PLUS Connectors (No-epoxy/No-polish)



Features:

- Easy installation:
 - No epoxy, no polishing
 - No bench tool required
 - Strip, cleave, and crimp
- Match fiber type of cable to fiber type of LightCrimp PLUS
- Mates with standard couplers, adapters, and adapter plates
- LC small form factor design is half the size of SC
- Select appropriate part number for termination to:
 - 900 μm tight-buffered fiber or 250 μm coated fiber
 - 1.6 – 2.0 mm jacketed fiber
 - 3 mm jacketed cable
- LC connector clip turns simplex connectors into duplex connectors and allows for polarity correction after termination.

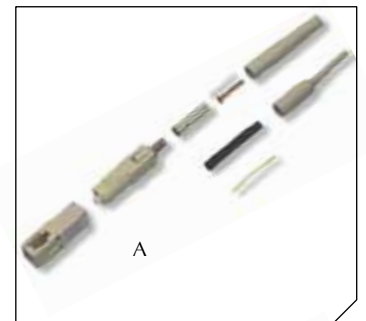
MALE CONNECTORS

Connector Type	Fiber Type	Housing Color	Used With	Boot Color	Figure	Part Number
Simplex LC	50/125 μm	Beige	900 μm & 250 μm Fibers	Black	A	6754483-2
	XG (850 nm LO 50/125 μm)	Beige	900 μm & 250 μm Fibers	Aqua	A	6754483-4
Duplex LC	Single-mode	Blue	900 μm & 250 μm Fibers	Blue	B	6754484-1
Simplex SC	XG (850 nm LO 50/125 μm)	Beige	900 μm & 250 μm Fibers, 3 mm Cable	Aqua	D	6588291-2
	62.5/125 μm	Beige	900 μm & 250 μm Fibers, 3 mm Cable	Beige	D	5492643-1
Duplex SC	Single-mode	Blue	900 μm & 250 μm Fibers, 3mm Cable	Blue	C	6693278-1
ST	62.5/125 μm	Metallic	900 μm & 250 μm Fibers, 3 mm Cable	Beige	E	5492642-2

LightCrimp Connectors (No-epoxy/Polish)**Features:**

- No epoxy needed
- Easy installation: strip, crimp, cleave, and polish
- Each connector kit comes with accessories needed to terminate to 250 μm fiber, 900 μm tight-buffered fiber, and 3 mm cables
- Duplex part numbers contain two connectors
- Multimode connectors are suitable for use with 50/125 μm , XG (850 nm LO 50/125 μm) and 62.5/125 μm fibers
- Mates with all standards compliant couplers, adapters, and adapter plates

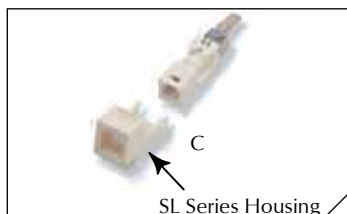
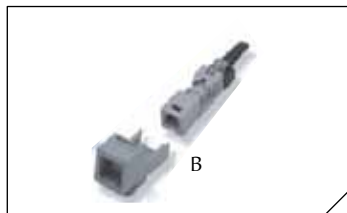
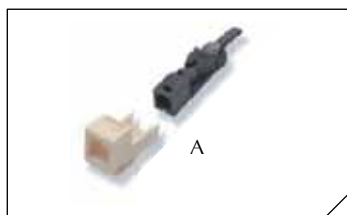
Description			Figure	Part Number
Simplex SC	Multimode	Ceramic Ferrule	A	5503692-1
Duplex SC	Multimode	Ceramic Ferrule	A	5503693-1
ST	Single-mode	Ceramic Ferrule	B	5504000-1
	Multimode	Ceramic Ferrule	B	5504001-1



BULKHEAD FEMALE CONNECTORS



MT-RJ Outlet Jacks (No-epoxy/No-polish)



Features:

- Outlet jacks terminate two 900 μ m tight-buffered fibers
 - No epoxy, no polishing, no crimping
 - Two fibers in one ferrule
 - Re-terminatable - improves yield
 - Tunable
 - No bench tool required
- Each part number includes:
 - One (1) outlet jack
 - Actuation tool
 - Bend-limiting boot
 - SL Series Housing
- Match fiber type of cable to fiber type of MT-RJ Jack
- Jack design eliminates need for MT-RJ Coupler
- Small form factor design is half the size of SC duplex
- Included SL Series housing allows use in any faceplate or outlet that accepts SL Series Jacks

Fiber Type		Jack Color	Figure	Part Number
50/125 μ m	Used with 900 μ m Tight-buffered Fibers	Black	A	6278414-X
XG 850nm LO 50/125 μ m	Used with 900 μ m Tight-buffered Fibers	Gray	B	1-6278414-2
62.5/125 μ m	Used with 900 μ m Tight-buffered Fibers	Beige	C	6278415-X

X denotes housing color: -1 = Almond, -2 = Black, -3 = White, -4 = Gray, -5 = Orange, -6 = Blue, -7 = Red, -8 = Yellow, -9 = Green, 1--0 = Violet, 1--1 = Electrical Ivory

MT-RJ Patch Panel Jacks (No-epoxy/No-polish)



Features:

- Patch panel jacks terminate either two 900 μ m tight-buffered fibers or two 250 μ m coated fibers (select appropriate part number):
 - No epoxy, no polishing, no crimping
 - Two (2) fibers in one ferrule
 - Re-terminatable – improves yield
 - Tunable
 - No bench tool required
- Each part number includes:
 - Six (6) patch panel jacks
 - Two (2) actuation tools
 - Fiber guide
 - Icon wheel
- Jack design eliminates need for MT-RJ Coupler
- Match fiber type of cable to fiber type of MT-RJ Jack
- Small form factor design is half the size of SC duplex
- Six (6) patch panel jacks fit in the MT-RJ Snap-in Adapter Plate (see LAN Chapter – page 61)
- SL Series Housings (see this Chapter - page 86) and bend-limiting boots sold separately

Fiber Type	Jack Color	Figure	Part Number	
			250 μ m Coated Fiber	900 μ m Tight-buffered Fiber
50/125 μ m	Black	A	6278303-1	6588880-1
XG 850 nm LO 50/125 μ m	Gray	B	6278303-4	6588880-3
62.5/125 μ m	Beige	C	6278303-2	6588880-2

MILITARY FIBER CONNECTORS

Harsh Environment Housing For LC Connectors

Our "LC protection housing" offers an easy system to upgrade from a standard to an environmental LC:

- Sealed against fluids and dust
- Shock, Vibration proof
- No cabling operation in field and no tools required for installation

General Characteristics

- Coupling Mechanism: Thread
- Shape: Circular
- Material: Metal
- Specification: MIL-DTL 3899 (Series III)

Mechanical Characteristics

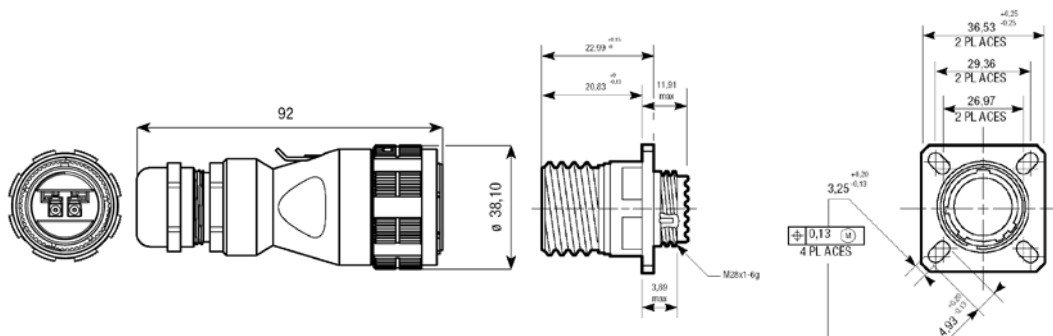
- Number of Channel: 2
- Typical Insertion Loss: 0,5dB in MM and SM
- Durability: 500 mating/unmating cycles 8 changes for <0,2dB)

Applications

- Commercial Avionics and Mass transit
- Base Stations
- Factory Automation
- Military Communications
- Naval Applications

Line Drawings (Dimensions in mm)

Plug (MIL DTL 38 999 Series III Size 19)

**Amphenol**

FEMALE TO FEMALE FIBER OPTIC ADAPTERS



SL Series Optical Fiber Multimedia Inserts

Features:

- Provide connections for different media types
- Configure faceplates to handle various services
- May be used in straight or angled faceplate modules
- Inserts easily snap into SL Series Modules, mounting straps, SL Series patch panels, and standard faceplates
- MT-RJ SL Series housing accepts one MT-RJ Jack sold separately (see this Chapter - page 84)

Description	Fiber Type	Figure	LC Coupler and Housing Color	Part Number
Blank	-	A	-	1116412-X
LC Coupler	62.5/125um	B	Beige	1-1933284-2
	50/125um		Black	1-1933284-1
	XG LO 850nm 50/125um)		Aqua	1933284-6
	Single-mode		Blue	1933286-4
	Single-mode APC		Green	1933286-3
SC Simplex Coupler	Multimode or Single-mode	-	-	1499836-X
ST Coupler	Multimode	C	-	1339123-X
	Single-mode	C	-	1479181-X
MT-RJ SL Series Housing	-	D	-	1374416-Y

X denotes insert color: -1 = Almond, -2 = Black, -3 = White, -4 = Gray, 1- -1 = Electrical Ivory

Y denotes color: -1 = Almond, -2 = Black, -3 = White, -4 = Gray, -5 = Orange, -6 = Blue, -7 = Red, -8 = Yellow, -9 = Green, 1- -0 = Violet, 1- -1 = Electrical Ivory, 2- -3 = Rose, 2- -4 = Aqua, 2- -5 = Brown, 2- -6 = Slate

MicroLink Fiber Optic Bulkhead Adapters



MicroLink offers a variety of standard adapters used for different applications like Telecommunications networks, CATV networks, Data communications networks, Active device termination, Instrumentation and Local Area Networks.

Features and Benefits

- Compliant with: JIS, IEC
- Convenience and easy of handling
- 100% factory tested optical performance
- Flanged or threaded mounting hardware
- Excellent concentricity

OPTICAL FIBER ATTENUATORS

MicroLink offers a variety of Attenuators used for different applications like Telecommunications networks, CATV networks, Data communications networks, Active device termination and Local Area Networks.



Features and Benefits

- Compliant with: JIS, IEC
- 100% factory tested optical performance
- High power endurance
- Modal noise
- Low polarization Insensitive
- Convenience and compact design

FC Attenuator

(-5db) P/N: AT-FC05

(-7db) P/N: AT-FC07

(-10db) P/N: AT-FC10

(-15db) P/N: AT-FC15



SC Attenuator

(-2db) P/N: AT-SC02

(-5db) P/N: AT-SC05

(-7db) P/N: AT-SC07

(-10db) P/N: AT-SC10

(-15db) P/N: AT-SC15



LC Attenuator

(-2db) P/N: AT-LC02

(-4db) P/N: AT-LC04

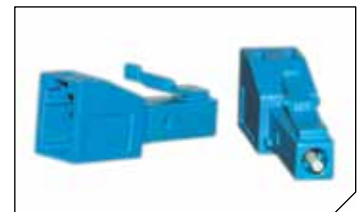
(-5db) P/N: AT-LC05

(-7db) P/N: AT-LC07

(-10db) P/N: AT-LC10

(-14db) P/N: AT-LC14

(-15db) P/N: AT-LC15



In Line Type Variable Attenuator

Available in any length and with any connector at either end.

Screw type multturn tune-up from -1dB to -40dB in linear adjustment.



MICROLINK'S PATCH CORDS

MicroLink Standard Patch Cords



MICROLINK's Multi Mode and Mono Mode Patch Cords offer the convenience of high quality factory terminations using premium fibers and proven low-loss connectors. The fiber optic cable assemblies feature excellent reliability, high performance, and are 100% optically and visually tested to the highest industry standards.

MICROLINK LTDA offers standard Patch Cords in a variety of configurations, outlined in the diagrams below. Custom cable assemblies are available with ultra-tight optical specifications, precise length tolerances, or custom labeling and packaging. For custom Patch Cord requirements, please contact our Customer Service Department

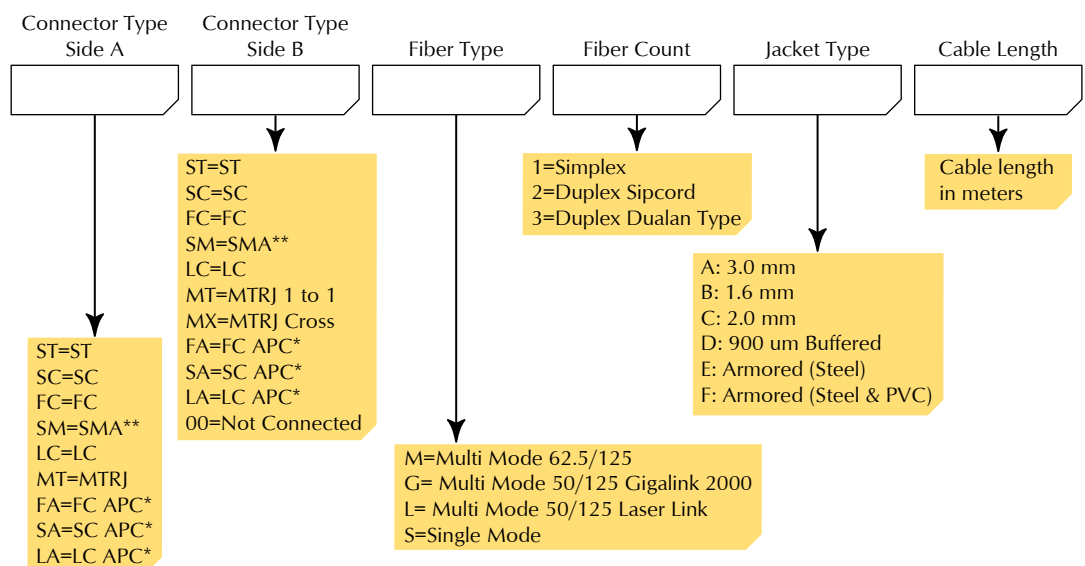
Angled Assemblies



MICROLINK's angled fiber Pigtail / Patch Cords are ultra reliable devices featuring low insertion loss and back reflection loss. APC (Angled physical contact) connectors direct reflections into the fiber cladding where they are rapidly dissipated; with the fiber surface perfectly polished to 8, the back reflection for these connectors exceeds -60db.

Available in your choice of simplex or duplex cable configurations, in most popular connector termination models e.g. FC/APC, SC/APC, and with various types of pigtailling.

Ordering Information



* Valid only for SM Fiber

** Valid only for MM Fiber

MICROLINK'S PATCH CORDS

Engineered Multi-Fiber Assemblies

MICROLINK's Multi-fiber Pigtails / Patch Cords are ultra reliable devices featuring low insertion loss and backreflection loss. Multi-fiber cable assemblies are enormously valuable in speeding up the installation process, by eliminating the need for unnecessary splicing or terminations in the field.

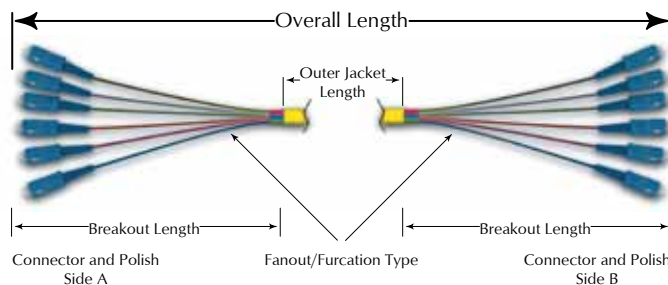
The list below includes some typical multi-fiber cable assemblies options. Please contact our Customer Service Department for assistance with configuring your required cable assembly.

Type of Fiber: 62.5/125, 50/125, 9/125

Applications: Internal, External, Armored, Non Armored, ADSS

Fiber Count: 2 - 144 fibers

Architecture: Breakout, Mini breakout, Loose tube



Armored Patch Cords

When you want to protect critical mission links or when the cable routings threaten the integrity of the links, Microlink's armored fiber optic patch cords are the solution.

Microlink offers two types of protection for Single/Duplex Patch Cords:

- Flexible Stainless Steel (standard type)
- PVC Covered Stainless Steel offering additional protection as a barrier against water and humidity.

Armored Benefits

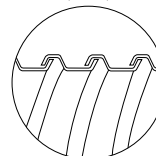
- Light weight
- Pliable
- Non-Stretch
- High pulling load strength
- Resists lateral pressure
- Excellent bending characteristics

Applications

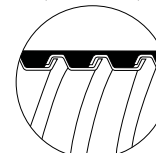
- Optical Fiber and Sensor Cable Protection
- Communications Equipment
- Medical Equipment
- Commercial Game Machines
- Robots
- Lighting
- Fiber Scopes
- Light Guides
- Measurement Tools



Standard Type
(Steel)



PVC covered Type
(Steel & PVC)



CONNECTORIZATION

Raychem
MicroLink



Smouv

SMOUV sleeves for fiber-optic fusion splices can be used to rebuild the primary coating of fiber to provide protection at the fusion joint area.

Sizes: 60mm / 45mm / 40mm

MicroLink

Epoxi Hysol Box



P/N: F1-707010

Contained in two separate tubes, the Hysol Epoxy can be heat or time cured. Hysol epoxy is excellent for general connector use.

- 50 minute worklife
- Ultra clear
- General purpose "0151"

TLC Furcation tube



P/N: F00FR900RN

This furcation tube is designed for the protection of 250um, 400um and 900um coated fibers. It accepts one up to 900um diameter fiber.

- 900um White

Fan Out Kits



Fan out kits route 250um fiber into 900um tubes ready for connectorization. Easily installed in minutes, these kits require no special tools. Color coded tubing allows easy identification. The furcation unit snaps together, eliminating epoxy.

AVAILABLE FOR:

- 6 Fiber Fan-Out Kit (25" Tubing). P/N: FANBT25-06
- 12 Fiber Fan-Out Kit (25" Tubing). P/N: FANBT25-12

Breakout Kits



This Kit provides extra protection over buffered fibers at the termination point. This kit contains 6 inches of short heat shrink tubing (1/2"), 6 inches of long heat shrink tubing (1"), 25 Meters of furcation tube 3mm, 25 Meters of furcation tube 1.2 mm, 12 units of 1/8" clear shrink tube, 12 units of 1/4" clear shrink tube, 2 D-Gel packets and 2 Hysol epoxy packets.

Available For:

- Multi Mode. P/N: F1-5527
- Single Mode. P/N: F1-5528

Kim Wipes

P/N: 34-155

Contained in a single box of Kim Wipes are 280 tissues. The fiber optic industry demands a lint free product when used with alcohol for cleaning fiber and connector end faces.

MicroLink



Flexible Piano Wire

P/N: F1-8265

Our piano wire is designed to fit both singlemode and multimode ferrules. The piano wire can easily be inserted, removing particles that block fiber entry.

Choose from the following hand held connector cleaners as an alternative to alcohol or solvent and wipes. All cartridges offer dry woven cloth which effectively remove dirt, dust, oil, grease, and debris from connector end faces.



2.5 mm Mini Foam Swabs

P/N: F1-0005

They are designed for dry cleaning fiber optic connector mating sleeves, bulkhead adapters and receptacles.

- Package quantity = 50 per pack



2.5 mm Stick Cleaner

P/N: 1918807-1

It is used to clean the end face of connectors already installed in patch panels and hardware devices.

- Package quantity = 250 per pack

**AMP
NETCONNECT**



Fiber Optic Connector Cleaner

P/N: F1-7111

This product offers a dry cleaning method with a quick, reliable operation and uniform results.

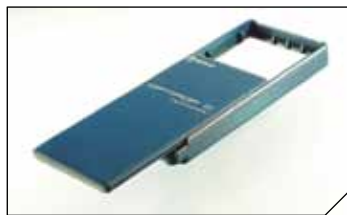
MicroLink



CLEANING SUPPLIES



Card Cleaner



P/N: 1918810-1

This Card Cleaner is designed to assist the technician to clean fiber optic connectors simply, effectively and inexpensively.



Fiber Optic Cleaning Kit



P/N. C182120

AFL Connector/Adapter Cleaning Kit includes:

- Cletop -SB (Qty = 1)
- Replacement Reel for Cletop -SB (Qty = 1)
- ACT-01 Cleaning Tips for 2.5mm adaptors (Qty = 20)
- 2 mini-tubs of FiberWipes (Qty = 90 wipes per mini-tub)
- Can of Fiber Prep Cleaning Fluid (Qty = 1).

POLISHING SUPPLIES

MicroLink Polish Film



Films used in the final step of fiber optic connectorization are designed to provide scratch-free, defect-free surfaces while producing optimal fiber height to meet required standards

White 0.3 μm	Lt. Green 1 μm	0.3 μm P/N: F1 - 0102 - 03
		1 μm P/N: F1 - 0102 - 1
		2 μm P/N: F1 - 0102 - 2
		3 μm P/N: F1 - 0102 - 3
		5 μm P/N: F1 - 0102 - 5
		9 μm P/N: F1 - 0102 - 9
		12 μm P/N: F1 - 0102 - 12
		15 μm P/N: F1 - 0102 - 15
Aqua 2 μm	Pink 3 μm	
Black 5 μm	Lt. Blue 9 μm	
Dark Yellow 12 μm	Dark Grey 15 μm	

MicroLink Fiber Cutters



Ruby Blade DualScribe

P/N: 45357

Kevlar Cutters



Fiber Optic Kevlar Cutter

P/N: F1-9809

Jacket Cutters



Jacket Stripper

P/N: F1-0016

Buffer Cutters



Miller Stripper (205µm / 900µm)

P/N: WO1224



No-Nik Stripper

P/N: NN203

- Strips 250µm or 500µm Coating
& 900 Buffer

Crimp Tools

ST Crimp tool

P/N: F1-3227

LC/MU Crimp Tool

P/N: F1-8825

ST/SC/FC Crimp Tool

P/N: 320103101

Polishing Tools

Hand Polishing Discs

- SC Polish Disc
P/N: F1 - 6928SC
- FC/PC Polish Disc
P/N: F1 - 6925FC
- ST Polish Disc
P/N: F1 - 6925ST
- MU/LC Polish Disc
P/N: F1 - 6930UN
- SMA Polish Disc
P/N: F1 - 6925SMA
- FDDI Polish Disc
P/N: 501791 - 1
- MTRJ Polish Disc
P/N: 86702 - 1000

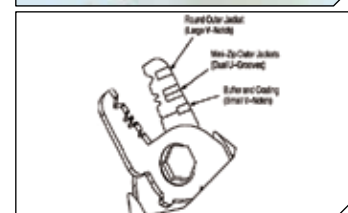
MicroLink



Multifunctional Tools

Fiber Optic Combination Strip Tool

P/N: 1278947-1





Termination Kit – AMP LightCrimp SC



Termination Kit – AMP LightCrimp SC includes:



Hand tool with Die Set

P/N: 492782-1



Microscope with 10X Objective

P/N: 1754767-1



Cable Stripper

P/N: 1278531-1



Combination Strip Tool

P/N: 1754708-1



Micro Strip Tool (.008)

P/N: 492109-2



Universal Cleave Tool

P/N: 503705-1

Cable Prep Template

P/N: 503694-1



Polishing Bushing, Metal

P/N: 503787-1



Polishing Bushing, Plastic

P/N: 502631-1

Scissor



Notes:

Kit also includes Polishing Films (5 μ m / 0,3 μ m), Polish Pad and Polish Plate. Photos are representative of kits – Contents may vary by part number.

CONNECTORIZATION EQUIPMENT

Connector Heat Oven

P/N: F1-9772

The FIS Connector Heat Oven includes a supplied 24 position holding block which will cure a variety of connectors including the FC, ST, SC, D4, SMA, LC and MU. The front panel features temperature control and power "on" light indicator. A thermometer is included with every oven.

A curing stand is sold separately to provide easy placement of cords during curing.

**FSM-60S Single Fiber Arc Fusion Splicer**

P/N: FSM-60S

The FSM-60S fusion splicer incorporates a user-friendly interface with enhanced features, and is one of the most reliable fusion splicers in the market today. The new durable construction offers better protection from dust, water, vibration and shock.

Features

- Core to core alignment by PAS (Profile Alignment System) technology.
- Environmental resistant features.
- World's most compact and lightest of its class.
- Arc calibration-free system.
- 4.1" TFT color LCD monitor.
- Dual directional operation system.
- Long life battery.
- Fiber holder option.
- Software upgrade via Internet.
- Detachable work table (attached to carrying case).



INSPECTION EQUIPMENT

Hand Held Universal Microscope

P/N: F1-9786

This universal handheld microscope is provided with an ST, FC and SC universal faceplate.

Insert the ferrule into the microscope and inspect the end face with ease. This hand held universal microscope is an exceptional value.

This complete 100X microscope is perfect for multimode connectors and is easy to use.

**VS 300 View Safe inspection Scope**

P/N: VS300

Features

- Video Technology
- No optical path to your eye
- 400X magnification
- Resolves 3/4 micron scratches
- Universal Adaptor Interface with new "pan and lock" centering mount
- Video Output



Optical Specifications	
Magnification	400X equivalent to 8" monitor for 20" distance, 600X on 12" monitor
Adaptor mount	Thread-on (Universal)
Safety filter	Not Required - No optical path to user
Video output	NTSC

General Specifications	
Operating temperature	0 to +50°C
Storage temperature	-20 to +60°C
Humidity	0 to 90% (non - condensing)
Power supply	2 AA alkaline batteries, optional AC adapter
Battery life	10 hours continuous
Indicators	Low battery
Weight	0.94 lbs (0.42 kg)
Size (H x W x D)	3.5 x 1.5 x 8.5 in (8.9 x 3.8 x 21.6 cm)

Model VS 300 includes:

- VS 300 Inspection Scope, 2 x AA batteries, neck strap, 2.5 mm universal adapter cap, and user's guide

VFS 2 Video Fiber Scope 2nd Generation



P/N: VFS2-00-0900

P/N: VFS2-00-0903

Features

- Unparalleled access to connectors and bulkhead adapters
- One-handed operation
- Resolves ¾ micron scratches
- Precision adapter tips for easy centering
- 350-micron field of view (diagonal)
- Smooth, precision focusing (left or right handed)
- Advanced lithium ion battery

Optical Specifications	
Field of view	350 microns diagonal (208 µm vertical, 285 µm horizontal)
Magnification	250X on 3.5" display
Resolution	¾ micron scratch
Video output	NTSC

VFS 2 Probe specifications	
Operating temperature	0 to +50°C
Storage temperature	-20 to +60°C
Humidity	0 to 90% (non-condensing)
Probe weight	0.4 lb (0.2 kg)
Probe body size (L x W x D)	6.3 x 1.3 x 1.3 in (15.9 x 3.3 x 3.3 cm)
Probe head size (with FC adapter), (L x W x D)	3.1 x 1.0 x 0.6 in (7.9 x 2.5 x 1.5 cm)

VFS 2 Display specifications	
Display Screen Size	3.5 inch TFT NTSC
Display package with protective boot size	9.0 x 2.0 x 4.7 in (22.9 x 5.1 x 11.9 cm)
Weight	2 lb (0.9 kg)
Power	Li-Ion battery pack or AC adapter
Battery life with VFS2 probe	> 4 hours
Operating temperature	0° to 50° C
Storage temperature	-20 to +60°C
Humidity	0 to 90% RH non-condensing
Li-Ion battery pack charging temp.	-10 to +45°C
Li-Ion battery pack recharging time	4 hours

Model VFS2-00-0900 includes:

VFS2 Probe, VFS 2 LCD Display unit 3.5" (9 cm), AC adapter, and user's guide.

Model VFS2-00-0903 includes:

VFS2 Probe, VCP1 USB interface and basic software (requires computer with display), and user's guide.

Visual fault Locator

P/N: 1828352-1

This is a compact and powerful visible red laser source designed to troubleshoot faults on fiber optic cables.

Features

- 650 µm (visible) Class 2 1.0mW max. Diode Laser
- Continuous and flashing (2-3 Hz pulsed) modes
- Uses 1 "AA" style battery for >30 hours of continuous use
- Standard 2.5mm adapter for SC, ST, and FC connectors
- Optional 1.25mm adapter for LC and MU connectors



VFI2 Visual Fault Identifier

P/N: VFI2

Features

- Visible red laser source, 650 nm
- High power, 1 mW
- Compact size
- Universal connector interface for quick connection
- 2.5m Universal Adapter included

Optical Specifications	
Emitter type	Laser, Class II FDA 21 CFR 1040.10 and 1040.11, IEC 60825-1:2007-03
Wavelength	650 nm ± 10 nm
Output power	1 mW (into single-mode fiber)
Modulation	2 Hz or CW selected



General Specifications	
Adapter	2.5 mm Universal
Power	2 AA alkaline batteries (60 hours typical)
Operating temperature	10 to 35°C, 85% humidity non condensing
Storage temperature	0 to 50°C, 95% humidity non condensing
Size (H x W x D)	14.0 x 6.2 x 3.2 cm (5.5 x 2.4 x 1.3 in)
Weight	< 200 g (7.06 oz)

Model VFI2 includes:

VFI2 unit, instruction card, and carrying case

Available Adapters

Model	Description
2900-50-0007MR	2.5 mm Universal adapter ¹ with captivated sleeve
2900-50-0010MR	1.25 mm Universal adapter ² with captivated sleeve

¹ 2.5 mm Universal adapter accepts SC, FC, ST, E2000, etc. ferrules.

² 1.25 mm Universal adapter accepts LC, MU, etc. ferrules.

Hi Lite - Visual Fault Identifier

P/N: Hi Lite

Features

- Visible red laser source, 650 nm
- High power, 1 mW
- Compact size
- Universal connector interface for quick connection
- 2.5m Universal Adapter included

Optical Specifications	
Emitter type	Laser, Class II FDA 21 CFR 1040.10 and 1040.11, IEC 60825-1:2007-03
Wavelength	650 nm ± 10 nm
Output power	1 mW (into single-mode fiber)
Modulation	2 Hz

General Specifications	
Adapter	2.5 mm Universal
Power	1 AAA alkaline batteries (16 hours typical)
Operating temperature	10 to 35°C, 85% humidity non condensing
Storage temperature	0 to 50°C, 95% humidity non condensing
Size (H x W x D)	7.0 x 3.6 x 1.5 cm (2.8 x 1.4 x 0.6 in)
Weight	50 g (1.75 oz)

Model HiLite includes:

HiLite unit, instruction card, and carrying case

OFI Optical Fiber Identifier

P/N: OFI 400

Features

- Rugged, handheld, lightweight
- Accepts 250 μ m, 900 μ m coated fiber, 3 mm jacketed fiber cable, and ribbon fiber
- No head swapping or adjustments
- Identifies light carrying fiber
- Low insertion loss - traffic remains uninterrupted
- Indicates direction of traffic
- Indicates Tone signal visually and audibly
- 270 Hz, 330 Hz, 1 kHz, and 2 kHz Tone detection - OFI 400 models
- Easy-to-read LCD display with Backlight - OFI 400 models
- Measures fiber core or relative power - OFI 400 models
- Power Off and Set Reference feature - OFI 400 models
- Battery operated
- Low battery indication
- Low cost, easy to use



Detectable signal range			
Fiber Type	Parameter	Wavelength, Signal	
250 μ m coated fiber (SMF-28 with 250 μ m CPC6 coating)	Minimum detect level (average power, typical)	1310 nm, CW or Traffic	-45 dBm
		1310 nm, Tone	-45 dBm
		1550 nm, CW or Traffic	-50 dBm
		1550 nm, Tone	-50 dBm
	Insertion loss (typical)	1310 nm	0.6 dB
		1550 nm	2.5 dB
3 mm jacketed fiber (SMF-28 with 250 μ m CPC6 coating and 3 mm, yellow jacket)	Minimum detect level (average power, typical)	1310 nm, CW or Traffic	-30 dBm
		1310 nm, Tone	-30 dBm
		1550 nm, CW or Traffic	-33 dBm
		1550 nm, Tone	-33 dBm
	Insertion loss (typical)	1310 nm	1.0 dB
		1550 nm	2.8 dB

Optical Specifications	
Detector type	InGaAs
Wavelength range	800 - 1700 nm
Calibrated size of fiber and wavelength	250 μ m (SMF-28) @1550 nm
Fiber stress	<100 kPSI max
Fiber size	250 μ m, 900 μ m, 2 mm or 3 mm jacketed & ribbon fiber
Tone detection	270, 330, 1000, or 2000 Hz (\pm 5%)
Core power measurement range	+13 dBm to - 50 dBm SMF28/28E 250um @ 1550nm
Measurement units	dBm, dB

General Specifications	
Display Type	Multi 7 segment LCD; 3 LEDs; 1 buzzer
Power	12 x 1.5V Alkaline
Battery life	>10,000 operations typical
Operation temperature	0° to 50°C 90% RH (Non-condensing)
Storage temperature	-30 to +60°C 90% RH (Non-condensing)
Dimensions (H x W x D)	22 x 3.8 x 2.8 cm (8.5 x 1.5 x 1.1 in)
Weight	168 g (6 oz)

Notes:

- 250 μ m coated fiber parameters are specified with OFI plunger in the "250/900/RIB" position.
- 2mm/3mm jacketed fiber parameters are specified with OFI plunger in the "2mm/3mm" position.
- Unless noted otherwise, all specifications are typical. Actual results can vary by several dB depending on fiber type, coating material, jacket color, jacket hardness, and other factors. All specifications stated above are as measured at 25°C.
- [CW] is a light signal that is not modulated.
- [Traffic] is a light signal modulated by a random data sequence.
- [Tone] is a light signal modulated into a nominal 50% duty cycle square wave.

Model OFI 400 Includes:

User's guide and carry case



OTDRs (Optical Time Domain Reflectometers) and Accessories

M700 Compact Single-mode OTDR

P/N: M700-11-0901PR



Features

- 38 / 36 dB dynamic range @ 1310 / 1550 nm
- Integrated Optical Power Meter (OPM) and Visual Fault Locator (VFL, 650 nm)
- LSA Measurements and manual events in Expert mode
- Pass/Fail Event and Link Thresholds settings
- OTDR results saved as industry standard (GR-196) .SOR files
- OPM stores results and displays up to three wavelengths simultaneously
- Large, high bright, sunlight readable, transreflective touchscreen
- Tool-free, switchable adapters (SC/FC/LC). ST test port adapter is available (order separately)
- Integrated fiber launch ring holder
- 2 USB host ports
- USB drive and Windows® compatible software included

OTDR Specifications	
Emitter Type	Laser
Safety Class	Class 1 FDA 21 CFR 1040.0 & 1040.11
Center Wavelengths	1310/1550 nm
Dynamic Range (SNR = 1)	38 / 36 dB (1310/1550 nm)
Event Dead Zone ¹	0.9 m
Attenuation Dead Zone ²	5.5 m
Pulse Widths	5, 10, 30, 100, 300 ns, 1, 3, 10, 20 μ s
Range Settings	250 m to 256 km
Distance Sampling Points	max. 64,000 points
Data Point Spacing	0.125 m (range 2 km) 0.25 m (range = 4 km) 0.5 m (range = 8 km) Range/# of data points (range \geq 16 km)
Group Index of Refraction (GIR)	1.4000 to 1.6000
Distance Uncertainty (m) ³	$\pm (1 + 0.0005\% \times \text{distance} + \text{data point spacing})$
Trace File Format	Bellcore GR-196 Version 1.1
Trace File Storage Media	Internal flash memory
	USB flash drive
	Downloadable from OTDR directly to PC
Trace File Storage Capacity	Internal 1000 fibers
Data Transfer to PC	USB
OTDR Modes	Full Auto, Real Time, Expert
Tool Free adapters	Modular cleanable SC/ST/FC/LC

¹ Typical distance between the two points 1.5 dB down each side of a reflective spike caused by a -45 dB event using 5 ns pulse width.

² Typical distance from event location to point where trace is within 0.5 dB of backscatter caused by a -45 dB event using 5 ns pulse width.

³ Does not include GIR uncertainty.

M200 Handheld OTDR

P/N: M200-00-0900PR

P/N: M200-11-0900PR

P/N: M200-12-0900PR

Features

- Handheld, 0.9 kg (2 lb)
- 22 dB (MM), 26 dB (SM) dynamic range
- Integrated VFL (650 nm)
- Tool-free, switchable adapters
- Transflective (indoor/outdoor) touch-screen display
- USB Host and Function Ports

Applications

- Tier 2 testing of premises networks
- FTTX PON certification and troubleshooting
- Fast fault location
- Splice verification
- Network documentation

Model	Description	Test Port Adapters
M200-00-0900PR	850/1300nm multi-mode and 1310/1550nm single-mode OTDR	(1) ST, (2) SC, and (1) FC *
M200-11-0900PR	1310/1550nm single-mode OTDR	SC and FC *
M200-12-0900PR	850/1300nm multi-mode OTDR	ST and SC *

* LC test port adapters are available (order separately).

Notes:

1 All models include a rugged, soft-sided carry case with shoulder strap, 110/220 VAC power adapter with country-specific power cord, and user guide.

2 M200 Standard OTDR supported languages: English, French, German, Italian, Portuguese and Spanish.



OFL 250 Handheld OTDR

P/N: OFL2-26-0910PR

P/N: OFL2-26-0924PR

Features

- Handheld, 0.8 kg (1.7 lb)
- Multiple-wavelength single-mode OTDR
- 1.5 m (typ.) event dead zone
- 26 dB dynamic range
- Integrated OPM, OLS, and VFL (650 nm)
- Tool-free, switchable adapters for OTDR & OPM ports (FC, SC, ST, LC, E2000 are available)
- Bellcore (GR-196) .SOR file format
- Rechargeable (> 12 hours) Li-Ion battery or AC power
- 3.5-inch, indoor/outdoor LCD
- Windows® compatible software to view, print, and archive test record
- Mini USB Port (connect to PC with cable)

Model Number	Description	Wavelengths
OFL2-26-0910PR	OFL 250 Single-mode OTDR	1310/1550 nm
OFL2-26-0924PR	OFL 250 Single-mode OTDR	1310/1550/1625 nm

Note: All OFL 250 models come with: a carry case, SC and FC adapters for the OTDR/OLS port, 2.5 mm universal adapters for the OPM and VFL ports, USB cable (connects with normal (Type A) USB port on your PC), AC power adapter, country-specific power cord, and a user guide.



Specifications	
Emitter Type	Laser
Safety Class	Class I FDA 21 CFR 1040.0 & 1040.11
Fiber Type	Single-mode
Center Wavelengths	1310 / 1550 / 1625 nm
Wavelength Tolerance	$\pm 20 / \pm 20 / \pm 10$ nm
Dynamic Range (SNR=1)	26 / 26 / 26 dB
Event Dead Zone ¹	1.5 m
Attenuation Dead Zone @ 5ns ²	Typ.6.0 m, max. 6.5 m
Pulse Widths	5, 10, 30, 100, 300 ns, 1, 3, 10 μ s
Range Settings	250 m to 256 km
Data points	Up to 16,000
Data Point Spacing	12.5 cm (range ≤ 4 km), Range/16000 (range > 4 km)
Group Index of Refraction (GIR)	1.4000 to 1.6000
Distance Uncertainty (m)	$\pm (1 + 0.005\% \times \text{distance} + \text{data point spacing})$
Trace File Format	Bellcore GR-196 V.1.1
Trace File Storage Medium	Internal memory (>1000 traces)
Data Transfer to PC	USB cable
OTDR Modes	Full Auto, End Locate, Expert, Live

¹ Typical distance between the two points 1.5 dB down each side of a reflective spike caused by a -45 dB event using 10 ns pulse width.

² Typical distance from event location to point where trace is within 0.5 dB of backscatter.

OFL280 Handheld FTTx OTDR



P/N: OFL280-102

P/N: OFL280-103

Features

- Handheld, 0.8 kg (1.7 lb)
- 1.3 m event dead zone
- 30 dB (28 dB @ 1625 nm) dynamic range
- FTTx construction model (OFL280-102) includes:
 - 1310/1490/1550 nm
- FTTx installation model (OFL280-103) includes:
 - 1310/1550/1625 nm
 - PON power meter
 - Live fiber filter at 1625 nm
- OPM, OLS, and VFL (650 nm)
- Internal memory (> 1,000 trace files)
- 3.5-inch, indoor/outdoor LCD display
- 12-hour, rechargeable Li-Ion battery
- USB port for PC connection

Applications

- Test dark fibers at up to three wavelengths
- Test live FTTx fibers at 1625 nm
- Measure splice, connection, an end - to - end loss
- Measure connection reflectance
- Measure FTTx downstream power levels at 1490 and 1550 nm
- Troubleshoot splice trays, terminals, and patch panels using the VFL
- Locate fiber 'macro' bends
- Trace fibers up to 5 km using the VFL
- Measure end - to - end loss using the OLS and OPM

Specifications	
Emitter Type	Laser
Safety Class	Class I FDA 21 CFR 1040.0 & 1040.11, IEC 60825-1:2007-03
Fiber Type	Single-mode
Available Wavelengths	1310 / 1490 / 1550 / 1625 nm
Wavelength Tolerance	± 20 / ± 20 / ± 20 / ± 10 nm
Dynamic Range (SNR=1)	30 / 30 / 30 / 28 dB
Event Dead Zone ¹	1.3 m
Attenuation Dead Zone @ 5ns ²	Typical 5.0 m, max. 6.0 m
Pulse Widths	5, 10, 30, 100, 300 ns, 1, 3, 10 μ s
Range Settings	250 m to 256 km
Data points	Up to 16,000
Data Point Spacing	12.5 cm (range \leq 4 km), Range/16000 (range > 4 km)
Group Index of Refraction (GIR)	1.4000 to 1.6000
Distance Uncertainty (m)	$\pm (1 + 0.005\% \times \text{distance} + \text{data point spacing})$
Trace File Format	Bellcore GR-196 V.1.1
Trace File Storage Medium	Internal memory (>1000 traces)
Data Transfer to PC	USB cable
OTDR Modes	Full Auto, End Locate, Expert, Live

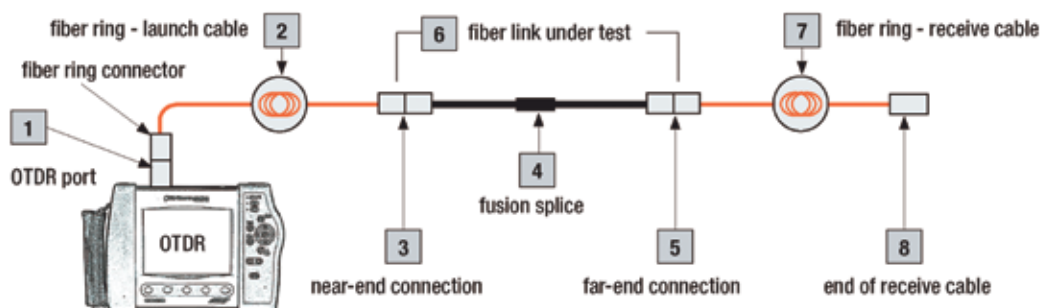
1. Typical distance between the two points 1.5 dB down each side of a reflective spike caused by a -45 dB event using 10 ns pulse width.

2. Typical distance from event location to point where trace is within 0.5 dB of backscatter.

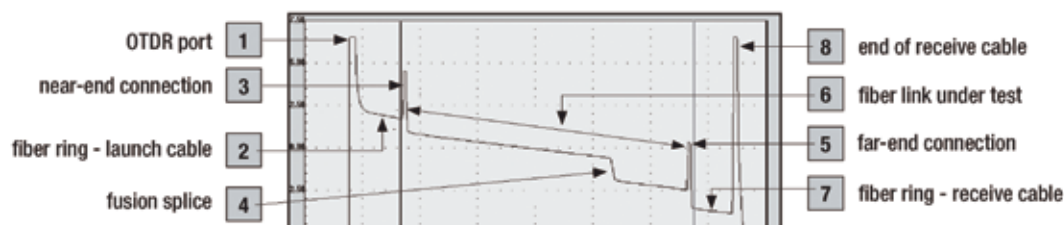
OTDR Fiber Rings

How to Generate a Baseline Trace Using Fiber Rings

- Use the Fiber Ring as a launch cable.
Connect the Fiber Ring between your OTDR and the fiber link under test. This will allow you to measure the loss of the near-end connection.
- Use the Fiber Ring as a receive cable.
Connect the Fiber Ring to the far-end connector of your fiber link under test. This will allow you to measure the loss of the far-end connection.
- By using Fiber Rings as both launch and receive cables, as shown in the diagram (right), you can measure total insertion loss of the fiber link under test.



Example OTDR Test Configuration With Launch And Receive Cables.



OTDR Trace Made Using Launch And Receive Cables.



Model	Configuration	Fiber Type	Fiber Length
FR1-M5-150- x1- x2	Standard, one fiber	Multimode, 50 μ m	150 m (492 ft)
FR1-L5-150-x1-x2	Standard, one fiber, laserOptimized	Multimode, 50 μ m	150m (492 ft)
FR1-M6-150- x1- x2	Standard, one fiber	Multimode, 62.5 μ m	150 m (492 ft)
FR1-SM-150- y1- y2	Standard, one fiber	Single-mode	150 m (492 ft)
FR1-SM-500- y1- y2	Standard, one fiber	Single-mode	500m (1640 ft)
FR1-SM-1000- y1- y2	Standard, one fiber	Single-mode	1000m (3280 ft)
FR3-M5-x1-MTRJ	MT-RJ near-end, A and B fibers	Multimode, 50 μ m	150 m (492 ft)
FR3-M6-x1-MTRJ	MT-RJ near-end, A and B fibers	Multimode, 62.5 μ m	150 m (492 ft)
FR3-SM-x1-MTRJ	MT-RJ near-end, A and B fibers	Single-mode	150 m (492 ft)
FR1-M5-x1-E2000	E2000 to ST, SC, FC, etc., one fiber	Multimode, 50 μ m	150 m (492 ft)
FR1-M6-x1-E2000	E2000 to ST, SC, FC, etc., one fiber	Multimode, 62.5 μ m	150 m (492 ft)
FR1-SM-y1-E2000	E2000 to ST, SC, FC, etc., one fiber	Single-mode	150 m (492 ft)
FR1-M5-E2000-E2000	E2000 to E2000, one fiber	Multimode, 50 μ m	150 m (492 ft)
FR1-M6-E2000-E2000	E2000 to E2000, one fiber	Multimode, 62.5 μ m	150 m (492 ft)
FR1-SM-E2000-E2000	E2000 to E2000, one fiber	Single-mode	150 m (492 ft)

x1, x2 – connectors for multimode cables, specify type [ST, SC, ASC (angled SC), FC, AFC (angled FC), LC]
y1, y2 – connectors for single-mode cables, specify type [ST, SC, ASC (angled SC), FC, AFC (angled FC), LC]
Other connector types, fiber types, and fiber lengths will be quoted upon request.

Single-Mode/Multi-Mode Test

SMLP5-5 Single-Mode/Multi-Mode Test Kit with Wave ID, Set Reference, and Data Storage



P/N: SMLP5-5

Features

- Handheld, rugged, lightweight
- Wave ID (auto identification & switching)
- Dual or single Wave ID, CW, Tone
- 270 Hz, 330 Hz, 1 kHz, 2 kHz Tone
- Large LCD with backlight (OPM5-2D)
- Power measurements in dBm or μ W; insertion loss in dB
- Reference power level storage
- Up to 500 records per wavelength storage
- USB port for download of stored records
- Windows® compatible software to view, print, and archive stored records
- Low battery indicator
- Long battery life with 2 x AA alkaline, optional AC adapter
- Free 50 μ m and 62.5 μ m mandrels
- Cost-effective, easy to use
- N.I.S.T traceable

Model SMLP5-5 includes:

OLS4 optical light source, OPM5-2D optical power meter, AA batteries, protective rubber boots, adapter cap, USB cable, Windows® compatible software and user's guide, 50 and 62.5 μ m mandrels, SMLP5-5 test kit user's guide, and carry case.

Optical Loss/Return Loss Test

Turbotest 506B Optical Loss/Return Loss Test Sets

P/N: T506B-FTTH

Features

- Rugged, handheld, designed for field use
- Passive Optical Networks (PON) testing
- Single fiber, bi-directional loss and return loss testing at 1310 / 1490 / 1550nm or 1310 / 1550 / 1625nm
- TRIIPLE wavelength test mode
- Talk Set option
- Up to 1000 test records (40 files) storage and download
- Free Windows® compatible software to view, print, and archive test records
- Lithium-Ion or AC adapter
- Cost-effective, easy to use



Specifications	
Calibrated wavelengths (nm)	1310, 1550, 1490
Output power (dBm)	-5
Emitter type	Laser
Safety class	FDA 21 CFR 1040.10 and 1040.11, and IEC 60825-1 amended Q2, 2001
Detector type	InGaAs
Insertion loss measurement range (dB)	45
Measurement range (dBm)	+26 to -50
Measurement units	dB, dBm, μ W
ORL dynamic range (dB)	65
Available connector types	ASC or AFC
Power	Lithium-Ion or AC Adapter
Li-Ion battery pack charging temp.	-10 to +45°C

Model T506B-FTTH includes:

Protective rubber boot, APC/UPC test jumper, adapter cap, serial cable, hex driver, screwdriver, mandrel, AC adapter, PC software, user's guide, and carry case.

Note: After model number (T506B - FTTH)

- Add - T for 40 dB 1310 nm Talk Set Option
- Add - Y for 40 dB 1550 nm Talk Set Option

Fiber Optic Field work



Fiber Optics connector assemblies, repair polishing, end-face cleaning and end-face inspection in the field must guarantee the same level of performance and specifications that are available in a lab environment. To meet this challenge, Microlink has the appropriate tools that provide the required quality level. Some of the available tools are Seikoh-Giken portable polishing machines, optical field sensors and Noyes powerful portable microscopes.

High precision portable systems are complemented with the best possible consumables, such as sanding disks, epoxies and other components that are equally utilized in Microlink's lab

Field Fusion



To ensure that the most strict specifications are met, Microlink has highly trained people as well as state of the art Fuji Kura fusion equipment.

Design Inspection and Auditing



Because our company focus is primarily oriented towards commercialization of telecommunications products, rather than systems integration, Microlink becomes an ideal business partner in the design, inspection, and auditing of physical fiber optic networks. Microlink, a company you may trust for your most sensitive fiber optic projects.

Connectivity Certification



To complement the above listed services and equipment, Microlink has special IR/RL EXFO and OTDRs "Loss Measurement Devices", both for 810/1300 multimode and 1310/1550 single mode windows. In addition, and to cover 50/125 and 62.5/125 fiber variations, Microlink also has the corresponding "OTDR Fiber rings"



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- 97 Visual fault Locator
- 97 VF12 Visual Fault Identifier
- 98 Hi Lite - Visual Fault Identifier
- 99 OFI Optical Fiber Identifier

100 **TEST EQUIPMENT**

- 100 OTDRs (Optical Time Domain Reflectometers) and Accessories
- 100 M700 Compact Single-mode OTDR
- 101 M200 Handheld OTDR
- 101 OFL 250 Handheld OTDR
- 102 OFL280 Handheld FTTx OTDR
- 103 OTDR Fiber Rings
- 104 Single-Mode/Multi-Mode Test
- 104 SMLP5-5 Single-Mode/Multi-Mode Test Kit with Wave ID, Set Reference, and Data Storage
- 105 Optical Loss/Return Loss Test
- 105 Turbotest 506B Optical Loss/Return Loss Test Sets

106 **SERVICES**

- 106 Fiber Optic Field work
- 106 Field Fusion
- 106 Design Inspection and Auditing
- 106 Connectivity Certification

WHY CHOOSE MICROLINK ?

High Quality

Quality and customer satisfaction are our main objectives. We adhere to the strictest manufacturing standards to ensure that our products exceed your expectations for performance and reliability. All our products are manufactured under extreme quality controls and in the manufacturing process we only utilize components that are ISO-9000 certified. Every unit manufactured is thoroughly tested before it is shipped to our customers.



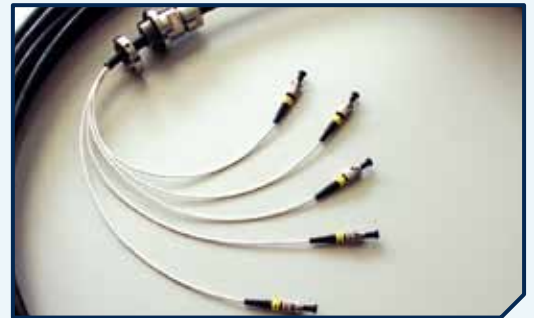
Immediate Delivery

Large inventory of products allows MICROLINK LTDA to ship orders in 24 hours or less.

Competitive Prices

Our raw products are purchased in large quantities directly from the manufacturers.

By eliminating intermediaries and maintaining a sizeable inventory of components MICROLINK LTDA has the ability to offer some of the best prices in the market.



Product Availability

From simplex jumpers to engineered multi-fiber assemblies, MICROLINK LTDA can design and supply all of your network needs, offering a variety of fiber optic products.



Who Are We?

MICROLINK LTDA is a private Colombian company, whose business orientation is focused to the assembly and distribution of high technology products, for the telecommunications industry.

Experience

With 25 years of experience, MICROLINK LTDA is the undisputed leader in the market of connectivity, offering our clients the best brands, prices, guaranteeing availability of products, and above all, an excellent, opportune and reliable service.





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